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Analysis of data from more than 21,000 soldiers measured in U.S. military anthropometric surveys since 1966 indicates that 0.47% exceed the upper limits of fit for the size Large PASGT helmet in one or more head dimensions. Although this frequency is relatively low, it suggests that at least 3,650 individuals in the active duty Army may be disaccommodated by the current PASGT sizing system, and that a size Extra-Large helmet will be needed if all soldiers must be fit within the system.

Several alternative methods for deriving the dimensional attributes of an Extra-Large helmet are discussed in this report, and a 6.3-mm (0.25 in) radial expansion of the existing size Large headform is recommended for developing the size Extra-Large helmet. Radial expansion was chosen in order to maintain the current shape of the PASGT helmet headform and to minimize the added weight due to the helmet size increase. The proposed Extra-Large limits of fit will accommodate the largest known individuals from the 1988 anthropometric survey as well as all prior military surveys. Keywords:

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PREFACE

This report was prepared in response to a request from the Armor Section, Life Support Systems Division, Individual Protection Directorate for anthropometric guidance in the development of an Extra-Large PASGT Helmet. The project officer for the PASGT helmet program is Mr. George Schultheiss. This work was performed under OM&A project number 728012-12.

The authors would like to express their appreciation to the following individuals for their contributions to this effort: Dr. Kenneth Parham for his assistance in the data analysis and review of the manuscript; Dr. Carolyn Bensel for her input during the initial discussions of this project; Dr. Larry Symington, (Chief, Materiel Systems Human Factors Branch, SATD) and Dr. Herbert Meiselman (Chief, Behavioral Sciences Division, SATD) for their comments regarding the final manuscript; and Mr. Philip Durand (Armor Section, Life Support Systems Division, IPD) for his input concerning the derivation of the original PASGT helmet sizing system. Finally, we wish to thank Mrs. Edna S. Albert, Technical Publications Editor (Natick), for her assistance in editing this manuscript.

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INTRODUCTION

As requested by Mr. George Schultheiss,[1] the project officer for the PASGT helmet program, this research explores the need for and feasibility of developing an Extra-Large PASGT helmet in order to accommodate soldiers who are currently unable to fit into the Large size helmet.[2] Thus the purpose of this report is to estimate the number of U.S. Army personnel who are currently disaccommodated within the existing PASGT helmet sizing system and to derive a set of design values necessary to construct an Extra-Large PASGT helmet.

U.S. Army Soldiers Disaccommodated within the Existing PASGT Sizing System

In order to estimate the maximum number of soldiers who exhibit head dimensions that exceed the design limits for the size Large PASGT, a numerical analysis was undertaken. Pooling U.S. Army and U.S. Air Force data from eight anthropometric surveys,[3-8] the percentage of individuals who exceed the upper limits for one or more of the three PASGT helmet key dimensions (head circumference, head length, and head breadth) was calculated. Since the maximum values of these key dimensions for the size Large helmet are head circumference (611 mm), head length (210 mm), and head breadth (166 mm) (see Table 1 for size prediction chart), those individuals who fell above any one of these values were identified as disaccommodated within the existing PASGT sizing system. While it is not standard practice to pool different sources of anthropometric data into a single data set, given the facts that we are investigating soldiers who fall into the upper limits of the distribution for head size, and these indivduals tend to be few in number, we did not want to underestimate the frequency of their occurrence in the Army. By pooling these data we were able to formulate an estimate of the percentage of soldiers whose head dimensions exceed the size Large PASGT helmet dimensions, based on a sample adequately represented by individuals at the upper tail of the distribution.

TABLE 1. Size Prediction Chart for the PASGT Helmet*
(Head Dimensions in mm)

HELMET SIZE	HEAD CIRCUM.	HEAD LENGTH	HEAD BREADTH
EXTRA-SMALL	535	180	142
SMALL	555	193	151
MEDIUM	576	200	159
LARGE	611	210	166

*These values represent the maximum head dimensions for each helmet size. If ANY dimension is greater than that specified for a given helmet size, and equal to or smaller than the next larger size, the correct helmet is the larger size. The largest of the three dimensions will determine the helmet size.

Combining these eight anthropometric surveys leads to an estimate of approximately 3.26% of individuals (695 out of 21,343) being disaccommodated within the existing PASGT sizing system. Based solely on the 1966 Survey of Army Personnel,* only 2.83% (189 out of 6682) of the soldiers would be disaccommodated by the PASGT sizing system. However, it was noted by Mr. Leonard Flores, Chief, Armor and Special Projects Branch, (IPD) that loss of up to 2.5 mm of helmet standoff at any point on the head would not significantly impair the PASGT helmet's protective capabilities. Using this 2.5-mm value, new head size limits for the size Large PASGT helmet are calculated as follows: head circumference (627 mm), head length (215 mm), and head breadth (171 mm). The head length and head breadth values were determined by adding 5 mm to the existing size Large PASGT helmet head size limits. These are based on loss of standoff estimates for the front and back of the head (2 * 2.5 mm) for head length and for each side of the head (2 * 2.5 mm) for head breadth. The increase in the head circumference limit from 611 mm is based on a change in head size accommodation estimated as (2π r), which yields a head circumference value of 627 mm, 611 + (2π * 2.5 mm). By permitting an increase in the upper limits of these key dimensions, the percentage of individuals who would be disaccommodated in the PASGT sizing system dropped to 0.47% (101 out of 21,343 individuals).

For comparative purposes, the number of individuals who would theoretically be disaccommodated in the M1 infantry helmet was also estimated. Since the M1 helmet is a "one-size-fits-all" item, key sizing dimensions are not used to issue the helmet. Thus it was necessary to estimate the maximum head size that could fit into the M1. This was accomplished by using a steel tape to measure the maximum circumference of the leather suspension band within the helmet liner. Head length and head breadth were not used in this analysis since it was not possible to record accurate linear measurements of the suspension band, which would closely correspond to actual head dimensions. The maximum head circumference that can be accommodated in the M1 helmet was estimated at 599 mm. Based on the referenced eight anthropometric surveys, 13.64% (2,912 individuals out of 21,343) would exceed the design limits for the M1 infantry helmet.

In sum, it is evident that the percentage of individuals successfully accommodated within the existing PASGT sizing system far surpasses the percentage accommodated in the M1 infantry helmet. Moreover, when the 2.5-mm loss of standoff estimate is incorporated into the PASGT sizing criteria, 1st to 99th percentile coverage of the three key dimensions is realized. Therefore, out of a total active duty U.S. Army population of 776,661 individuals as of September 1987,* we estimate that only 0.47%, 3,650 individuals, would be disaccommodated within the existing PASGT sizing system.

Derivation of the Original PASGT Sizing System

Having specified the number of individuals who are currently disaccommodated in the PASGT sizing system, the next step was to derive design values to be used in the development of a helmet large enough to accommodate them. In order to accomplish this, a review of the derivation of the original PASGT helmet sizing system was initially undertaken. The

overall development and sizing of the helmet has been reported in Claus et al.[10] and McManus et al.,[11] and indicates that the sizing system proceeded in two separate steps. In the first step, sizing algorithms were derived by Goulet and Sacco, [12,13] of the Ballistics Research Laboratories (BRL), using anthropometric data from the 1959 Survey of Army Aviators[9] and the 1966 Survey of Army personnel.[8] Of the various sizing systems generated by BRL, the helmet developers selected a nine-size system which they then refined into a three-size system for the PASGT helmet as shown below in Table 2. This was done because overlap in the head dimensions among the original nine sizes was too great to yield an efficient sizing system.[11]

TABLE 2. BRL's Original Nine-Size System as Refined by the PASGT Helmet Developers (Head Dimensions in mm)

Original Size	PASGT Size	Head Circumference	Head Length	Head Breadth	Head Height
1	Large	611	218	170	146
2		605	213	168	141
3		599	209	165	139
4		591	207	163	137
5		582	205	161	133
6	Medium	581	201	159	132
7		573	200	158	129
8		570	197	155	126
9	Small	557	193	152	123

Having settled on a three-size system (small, medium, and large), which would satisfy sizing requirements, the next step was to collect head shape data that could be used to derive design values for each of the three helmet sizes. Helmet design values were derived from a sample of 106 U.S. Army personnel from Ft. Devens, MA using data gathered by means of an innovative head measuring device, a Three-Dimensional Surface Descriptor. This device consists of a hemispherical shell upon which 27 movable probes are inserted at various points in order to quantify the three-dimensional shape of an individual's head.[11] After sorting these 106 individuals into the three helmet sizes, design values were calculated as the within-size mean values of these 27 probe readings. Plaster headforms were then shaped by a sculptor to conform to the 27 probe design values. The headforms thus reflect nude head dimensions and do not include the 0.5-in. standoff margin that was incorporated in the helmet molds.

Finally, it is important to note that the size Large helmet design values were based on the within-size mean plus one standard deviation.[10] The within-size mean value plus one standard deviation was used to set the design values for size Large, because, without the addition of one standard deviation, design values for the Large helmet were too small to accommodate the size Large key dimensions. This situation occurred because the probe values are so poorly correlated with the head dimensions used to derive the sizing system.

Derivation of Extra-Large PASGT Helmet Design Values

The most direct approach to derive a set of Extra-Large design values would have been to use exactly the same methods employed in development of the other PASGT helmet sizes. Unfortunately, this requires access to probe data for individuals beyond the size Large limits (of which there was only one in the Ft. Devens data base). The possibility of acquiring such data was considered. However, because Extra-Large individuals are relatively rare (3 per 1000 on the average), and because the probe data did not work well in developing the size Large helmet,[11] acquisition of additional probe data was not pursued.

A second approach considered was the use of regression equations to predict appropriate probe design values for an Extra-Large helmet. This method uses the mathematical relationships between key dimensions specified in the sizing algorithm (head circumference, head length, and head breadth) and the probe values to predict the proportionally appropriate probe values for a size Extra-Large head. Accordingly, appropriate multiple regression equations were calculated, and the results are reported in Table 3. Head circumference, head length, and head breadth were entered as the independent variables used to predict each of the 26 probe values, (data from probe #27 were not available for analysis). As mentioned earlier, the multiple correlation coefficients between the key dimensions and the probe values are quite low, and in some cases not even statistically significant. This indicates that sorting individuals into PASGT helmet sizes using the algorithms derived in ref 12 does <u>not</u> guarantee that they will have similar probe values within a size and different probe values between sizes. This explains why the original PASGT developers found that the mean probe values for individuals wearing a size Large helmet were 'too small' for the Large headform to meet the key dimension limits. That is, with such low correlation between overall head size and probe values (Table 4), probe value means should not be very different among the three sizes. The solution used on the size Large helmet was an arbitrary one; as discussed above, the developers added a standard deviation to each probe's mean value, and that brought the headform in line with expected key dimension limits.

Such low correlation between key sizing dimensions and probe values contraindicates the use of regression analysis to derive Extra-Large design values. Futhermore, it also suggests that acquisition of additional probe data on Extra-Large heads would <u>not</u> be helpful since these probe values may not be very different from those seen on Large or even Medium size heads. At this point we concluded that a completely different approach must be taken.

TABLE 3. Summary Data for the Regression Equations Used to Predict Probe Lengths. Head Circumference, Head Length, and Head Breadth Used as Predictor Variables

Probe #	Head Circum.	Head Length	Head Breadth	Head Weight
1	0.2742*	0.1181	0.2475*	0.0952
2	0.4098**	0.2708*	0.2554*	0.2294*
3	0.3204**	0.3670**	0.0041	0.1500
4	0.1513	0.0e7e	0.1294	0.1259
5	0.0e9e	-0.0510	0.1917	0.0805
6	0.47e5**	0.5014**	0.0223	0.1998
7	0.2e59*	0.2755*	0.0259	0.1574
8	0.2609*	0.1984	0.2591*	0.2298**
9	0.2142	0.1e24	0.2782*	0.3653**
10	0.2e69*	0.1787	0.3602**	0.4969**
11	0.2851**	0.30e9**	0.3191**	0.4559**
12	0.4224**	0.4547**	0.2325*	0.3951**
13	0.3711**	0.3545**	0.0614	0.1960
14	0.3819**	0.3254**	0.2445*	0.2763*
15	0.3377**	0.2504*	0.3101**	0.2142
16	0.1824	0.0272	0.2670*	0.0983
17	0.3187**	0.1940	0.3857**	0.2733*
18	0.2281*	0.1167	0.2629*	0.0769
19	0.3832**	0.3836**	0.1379	0.1575
20	0.2188	0.1937	0.0442	0.1134
21	0.1977	0.1739	0.0785	0.1168
22	0.2051	0.0994	0.2829*	0.2260*
23	0.0651	-0.1172	0.3304**	0.0517
24	0.1197	-0.0092	0.3175**	0.2548*
25	-0.0027	-0.0876	0.1857	-0.0169
26	0.5020**	0.5855**	0.0498	0.2003

* Significant at the 0.01 level
** Significant at the 0.001 level

TABLE 4. Correlations Between Head Dimensions and the Twenty-Six Probe Lengths

Probe #	Head Circum.	Head Length	Head Breadth	Head Height
1	0.[illegible]*	0.1181	0.2475*	0.0982
2	0.4098**	0.2703*	0.3554*	0.2294*
3	0.3204**	0.3670**	0.0041	0.1503
4	0.1513	0.0[illegible]e	0.1294	0.1239
5	0.069[illegible]	-0.0510	0.1917	0.0805
6	0.4782**	0.[illegible]**	0.0223	0.1[illegible]8
7	0.2[illegible]*	0.2[illegible]*	0.0229	0.1574
8	0.2[illegible]*	0.1[illegible]	0.2591*	0.[illegible]**
9	0.2142	0.1[illegible]	0.2768*	0.3[illegible]**
10	0.26[illegible]*	0.1797	0.3602**	0.4[illegible]**
11	0.3[illegible]**	0.30[illegible]**	0.3191**	0.4[illegible]**
12	0.4224**	0.4[illegible]**	0.3325*	0.3[illegible]**
13	0.3711**	0.3[illegible]**	0.0614	0.19[illegible]
14	0.3[illegible]**	0.3[illegible]**	0.2445*	0.2788*
15	0.3377**	0.2504*	0.3101**	0.2142
16	0.1824	0.0272	0.2670*	0.0983
17	0.3183**	0.1943	0.3857**	0.2733*
18	0.2281*	0.1197	0.2628*	0.07[illegible]*
19	0.3832**	0.3[illegible]**	0.1379	0.1575
20	0.2188	0.1957	0.0442	0.1134
21	0.1977	0.1739	0.0785	0.1168
22	0.2031	0.0994	0.2829*	0.2260*
23	0.0651	-0.1172	0.3304**	0.0517
24	0.1197	-0.0092	0.3175**	0.2548*
25	-0.0027	-0.0876	0.1857	-0.0169
26	0.5020**	0.5853**	0.0498	0.2003

* Significant at the 0.01 level
** Significant at the 0.001 level

As indicated previously, relatively few individuals in our existing military data bases actually exceed the size Large limits. Moreover, as presented in Table 5, these Extra-Large subjects do not exceed existing design limits by very much. An alternative approach might thus be to keep the same shape as is present in the size Large headform, but expand it radially sufficiently to accommodate the largest head expected to wear a PASGT helmet.

TABLE 5. Percentage of Individuals Disaccommodated in the PASGT Helmet Sizing System Based on Size Large Upper Limits of 611 mm (Head Circumference), 210 mm (Head Length), and 186 mm (Head Breadth)

Anthropometric Survey	N Total	N Disaccom.	Percent Disaccom.	Max Circ.	Max Lgth.	Max Brdth.
Army Aviators (1959)	500	20	4.00	612	222	173
A.F. Personnel (1965)	3869	138	3.57	618	222	174
Army Personnel (1966)	6682	189	2.83	637	223	174
U.S. Navy (1966)	4095	89	2.17	624	219	173
U.S. Marines (1966)	2008	44	2.19	615	221	174
A.F. Aviators (1967)	2420	179	7.40	620	226	176
Army Aviators (1970)	1482	33	2.23	615	217	172
Army Personnel (1977)	287	4	1.39	610	214	167

The data confirm the initial expectation that radial expansion of the existing Large headform by a value of 0.25 in (6.3 mm) would serve to accommodate all of the individuals who, based on the eight anthropometric surveys examined, would require an Extra-Large PASGT helmet. Specifically, soldiers exhibiting head dimensions up to 650 mm in circumference, 223 mm in length, and 179 mm in breadth could be accommodated.

Out of the 21,343 individuals represented in the pooled survey population, only one individual who exhibits a head length of 226 mm would be disaccommodated in the proposed Extra-Large helmet. However, if a 2.5-mm loss of standoff is permitted, this individual will also be accommodated. Therefore, it is concluded that pursuing a 0.25-in (6.3-mm) radial increase in the size Large PASGT headform is the most practical solution to the problem of developing an Extra-Large PASGT helmet.

Assessment of PASGT Helmet Standoff

While a 0.25-in radial increase in the size Large headform will certainly accommodate the largest head breadths, lengths, and circumferences known, it is unclear whether a 0.25-in. radial increase will provide sufficient helmet standoff at skull locations other than those used to define the key dimensions. That is, it is theoretically possible to provide the necessary standoff at the points of maximum breadth and length, and to provide sufficient circumference to accommodate the head at the level of maximum circumference, yet still have too little standoff at other points on the head. Thus an analysis of available standoff at probe locations was undertaken on both the standard PASGT helmet and the proposed Extra-Large helmet.

To accomplish this, the 106 Ft. Devens fit test subjects were first sorted into their respective helmet sizes based on values of the three key sizing dimensions currently used to issue the helmets: head circumference, head length, and head breadth. This procedure yielded the following distribution of individuals in each of the three size categories: Small-21, Medium-54, Large-30, and one individual who exhibited head dimensions that placed him beyond the range of size Large. Next, the 26 probe length values used in construction of the original head forms were subtracted from each individual's actual probe values. These differences were obtained for all individuals within each of the three size categories. The resulting differences between the two sets of values are then a reflection of the amount of standoff afforded each individual at the various probe locations. Positive differences indicate that a head value is larger than its corresponding form value and, therefore, the 0.5-in (12.7 mm) standoff between an individual's head and the helmet made over that headform will be violated. Thus if only one probe out of the 26 is positive for each individual, the 0.5-in standoff has not been maintained. Differences calculated between Ft. Devens subjects' head values and PASGT helmet headform values are summarized by size category in Appendixes A through G.

Upon review, it is clear that individuals in all size categories have at least one probe location without a 0.5-in standoff. Even if the 2.5-mm loss of standoff suggested by Mr. Flores is permitted, only one individual (a size Medium) is afforded the minimum required standoff for all 26 probe locations. It must be noted that the overall trend apparent in these data strongly suggests that the 0.5-in standoff is not consistently maintained in any of the three PASGT helmet sizes, and therefore, an Extra-Large helmet designed according to our recommended 0.25-in radial increase in the size Large headform may also demonstrate a lack of uniform standoff, even if it does retain the shape characteristics of the size Large headform.

This possibility was examined using the only relevant probe data available -- that of the single individual in the Extra-Large size category. Appendix G reports the results of comparisons between his head values and those of the size Large headform with the proposed 0.25-in radial increase. As can be seen from Appendix G, loss of the minimum recommended standoff does not occur at any of the 26 probe locations. Therefore in terms of standoff loss at probe locations, the proposed Extra-Large helmet may be an improvement over the existing sizes of the PASGT helmet. However this conclusion is based on a single subject, and so a fit test of the proposed Extra-Large helmet will need to be conducted.

Conclusion and Recommendations

Upon reviewing U.S. military anthropometric survey data from over 21,000 soldiers, it is concluded that approximately 3.0% of these individuals exhibit head dimensions that place them beyond the range of head sizes currently accommodated within the PASGT helmet sizing system. The percentage of individuals disaccommodated falls to 0.47% if a standoff loss of 2.5-mm is permitted. Having examined several approaches for deriving a set of design values useful in manufacturing a size Extra-Large PASGT helmet, the following recommendations are forwarded.

(1) Based on statistical analyses described herein, it is recommended that the proposed Extra-Large helmet incorporate a 0.25-in (6.3-mm) radial increase over the existing size Large helmet. This approach will result in an Extra-Large helmet design that should accommodate the total number of U.S. Army soldiers who are currently unable to fit into the Large PASGT helmet.

(2) It is further recommended that, upon completion and delivery of an Extra-Large prototype helmet, a fit test be conducted on individuals whose head dimensions exceed the size Large PASGT helmet limits in order to verify the range of head sizes actually accommodated. Moreover, a human factors evaluation and equipment compatibility study is also recommended for this item. This will provide insight into the extent to which the 0.25-in radial increase in helmet size will potentially impact upon head mobility, vision, and equipment integration around the head and face.

This document reports research undertaken at the
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APPENDIX A

PROBE DELTAS (PROBE VALUE - SMALL HEADFORM VALUE) FOR SUBJECTS IN THE SIZE SMALL PASGT HELMET

APPENDIX A

PROBE DELTAS (PROBE VALUE - SMALL HEADFORM VALUE) FOR SUBJECTS IN THE SIZE SMALL PASGT HELMET

Line 1: P1DELTA P2DELTA P3DELTA P4DELTA P5DELTA P6DELTA P7DELTA

Line 2: P8DELTA P9DELTA P10DELTA P11DELTA P12DELTA P13DELTA P14DELTA

Line 3: P15DELTA P16DELTA P17DELTA P18DELTA P19DELTA P20DELTA P21DELTA

Line 4: P22DELTA P23DELTA P24DELTA P25DELTA P26DELTA

Note: Delta Values Greater Than 2.5 mm Indicate Loss of Recommended Standoff at a Given Probe Location.

ID=2	-.24	3.26	2.01	-3.59	-7.98	2.87	4.52
	16.04	10.57	10.74	10.24	4.52	7.98	9.11
	10.28	6.27	11.83	-4.76	.80	.24	2.17
	-.71	3.01	.62	-11.41	-2.97		
ID=3	5.31	4.06	1.22	1.17	-2.43	.49	2.93
	-15.71	9.77	10.74	12.62	12.46	6.39	7.52
	10.28	9.44	13.41	7.14	-.79	-.55	2.96
	1.67	-6.52	3.00	20.34	-.59		
ID=6	3.72	1.67	-3.54	-2.00	-7.98	-1.89	-8.98
	-14.92	-13.24	-16.25	-15.16	-10.56	.04	-8.36
	-8.77	22.94	-10.40	23.02	1.59	1.04	-7.36
	-8.64	-6.52	-13.67	15.57	-3.76		
ID=12	-8.98	-3.09	8.36	8.32	5.51	-11.41	6.11
	8.89	4.22	5.18	.71	-3.42	1.63	3.55
	-.04	-8.02	-4.05	-16.67	-15.87	8.18	6.93
	10.41	9.36	8.56	4.46	-3.76		
ID=26	4.52	-.71	-7.51	-8.35	-6.39	6.84	-9.77
	-1.43	-2.13	-3.55	-.08	2.93	-4.72	-5.18
	-2.42	24.52	-1.67	-1.59	2.39	-7.69	-7.36
	-4.68	-6.52	-6.53	-1.89	7.35		
ID=37	-3.42	-.71	2.01	3.56	.75	-.30	-.24
	.96	1.04	.42	-.08	-1.04	2.42	.37
	3.14	.71	3.09	1.59	-.79	2.63	-1.80
	-1.50	-6.52	-.97	-4.27	-2.18		
ID=44	.55	-3.09	-5.13	-7.56	-6.39	6.84	-1.04
	4.13	5.81	5.18	11.03	10.87	-3.13	4.34
	7.90	7.06	12.62	12.70	11.12	-5.31	-4.18
	-3.88	-9.69	-3.35	-12.21	-.59		
ID=49	-8.98	2.47	2.81	7.52	2.34	-6.65	7.69
	9.69	6.60	5.18	3.09	11.66	6.39	8.31
	5.52	.71	3.09	-7.94	-9.52	7.39	8.52
	7.23	6.18	6.97	-1.89	-1.38		

ID=51	3.72	5.64	-7.51	-4.38	-13.84	.49	-8.18
	-11.74	-13.24	-13.08	-8.81	-5.80	5.60	-13.12
	-8.77	.71	-5.64	2.38	2.39	-8.49	-10.53
	-13.41	-8.11	-15.26	-14.59	-5.35		
ID=54	-2.63	-3.88	-2.75	-8.35	-7.19	-.30	-.24
	2.54	5.81	6.77	3.89	-.24	-2.34	.37
	-.04	-2.46	3.89	-2.38	-.79	-2.93	-1.01
	-.71	-4.14	1.41	-3.48	.21		
ID=66	1.34	-.71	.42	-2.79	-2.43	-5.86	6.90
	8.10	9.77	11.53	7.06	-1.04	4.81	9.90
	12.66	5.47	13.41	-.79	-6.34	2.63	2.96
	.88	-8.11	5.38	-8.24	-5.35	.	
ID=71	-4.21	-5.47	-7.51	-.43	3.92	2.87	-5.80
	-5.39	-6.10	-4.34	-1.67	-1.83	-7.10	-7.56
	2.34	-10.40	-10.40	-8.73	-4.76	-2.93	-2.59
	-2.29	.62	-.97	6.05	5.76		
ID=79	-1.04	3.26	-2.75	-1.21	-1.63	-4.27	-5.01
	-2.22	-1.34	2.01	.71	2.14	-3.13	-2.80
	.76	1.51	-2.46	-5.56	9.53	-4.52	-5.77
	.09	5.39	3.00	3.67	1.00		
ID=83	-5.80	-3.09	7.57	7.52	5.51	-5.86	7.69
	6.51	3.42	2.01	-1.67	-3.42	2.42	1.17
	1.55	-6.43	-31.04	-3.97	-9.52	8.97	9.31
	8.02	4.59	6.17	2.88	-.59		
ID=89	-9.77	-4.68	1.22	8.32	17.42	-13.00	2.93
	-2.22	-2.93	-5.14	-7.23	-14.53	.84	-1.21
	-7.18	-11.99	-12.78	-15.88	-21.42	5.01	6.14
	7.23	11.74	6.17	9.22	-4.56		
ID=91	9.28	6.44	2.01	-2.79	-8.77	-5.86	-.24
	4.13	6.60	7.56	7.86	6.11	3.22	2.76
	7.90	7.06	15.79	11.91	5.56	-2.93	-4.98
	-6.26	-10.49	-.17	-13.79	-19.64		
ID=96	-18.50	-10.23	2.01	16.26	18.21	-9.83	4.52
	.96	2.63	.42	-4.84	-8.18	-3.92	-5.18
	-11.15	-12.78	-12.78	-24.61	-21.42	8.97	9.31
	13.58	20.47	12.53	13.99	-7.73		
ID=99	1.34	-2.29	4.39	-4.38	1.54	1.29	.55
	-5.39	-7.69	-8.31	-5.64	-4.21	.04	-1.21
	-7.18	-7.23	-7.23	-5.56	-4.76	-.55	-.21
	-3.09	-.17	-4.14	-.30	1.79		
ID=104	-10.56	-8.64	.42	1.17	16.62	-5.06	.55
	-8.57	-14.83	-17.04	-14.37	-8.18	-4.72	-3.59
	-19.88	-19.13	-24.69	-23.02	-15.08	2.63	6.93
	.88	6.97	-4.94	11.61	2.59		
ID=111	-1.04	-1.50	-2.75	-3.59	-4.01	4.46	-2.63
	.96	.25	-1.17	1.51	6.11	-3.13	-2.80
	-.83	-3.26	-.08	-3.18	2.39	-6.90	-.21
	.88	-.96	.62	2.08	9.73		
ID=112	-7.39	-8.64	-6.72	-4.38	-4.81	9.22	.55
	5.72	7.39	9.15	9.44	9.28	-6.31	.37
	-.83	-8.02	6.27	-.00	7.15	-4.52	-.21
	-.71	-4.93	4.59	-1.89	6.56		

APPENDIX B

PROBE DELTA FREQUENCIES AND DESCRIPTIVE STATISTICS
FOR SUBJECTS IN THE SIZE SMALL PASGT HELMET

APPENDIX B

PROBE DELTA FREQUENCIES AND DESCRIPTIVE STATISTICS FOR SUBJECTS IN THE SIZE SMALL PASGT HELMET

P1DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-18.50	1	4.8	4.8	4.8
-10.56	1	4.8	4.8	9.5
-9.77	1	4.8	4.8	14.3
-8.98	2	9.5	9.5	23.8
-7.39	1	4.8	4.8	28.6
-5.80	1	4.8	4.8	33.3
-4.21	1	4.8	4.8	38.1
-3.42	1	4.8	4.8	42.9
-2.63	1	4.8	4.8	47.6
-1.04	2	9.5	9.5	57.1
-.24	1	4.8	4.8	61.9
.55	1	4.8	4.8	66.7
1.34	2	9.5	9.5	76.2
3.72	2	9.5	9.5	85.7
4.52	1	4.8	4.8	90.5
5.31	1	4.8	4.8	95.2
9.28	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P1DELTA

Mean	-2.512	Std Err	1.440	Median	-1.038
Mode	-8.975	Std Dev	6.600	Variance	43.554
Range	27.781	Minimum	-18.500	Maximum	9.281

Valid Cases 21

P2DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-10.23	1	4.8	4.8	4.8
-8.64	2	9.5	9.5	14.3
-5.47	1	4.8	4.8	19.0
-4.68	1	4.8	4.8	23.8
-3.88	1	4.8	4.8	28.6
-3.09	3	14.3	14.3	42.9
-2.29	1	4.8	4.8	47.6
-1.50	1	4.8	4.8	52.4
-.71	3	14.3	14.3	66.7
1.67	1	4.8	4.8	71.4
2.47	1	4.8	4.8	76.2
3.26	2	9.5	9.5	85.7
4.06	1	4.8	4.8	90.5
5.64	1	4.8	4.8	95.2
6.44	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P2DELTA

Mean	-1.424	Std Err	1.019	Median	-1.500
Mode	-3.088	Std Dev	4.668	Variance	21.793
Range	16.669	Minimum	-10.231	Maximum	6.438

Valid Cases 21

P3DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-7.51	3	14.3	14.3	14.3
-6.72	1	4.8	4.8	19.0
-5.13	1	4.8	4.8	23.8
-3.54	1	4.8	4.8	28.6
-2.75	3	14.3	14.3	42.9
.42	2	9.5	9.5	52.4
1.22	2	9.5	9.5	61.9
2.01	4	19.0	19.0	81.0
2.81	1	4.8	4.8	85.7
4.39	1	4.8	4.8	90.5
7.57	1	4.8	4.8	95.2
8.36	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P3DELTA

Mean	-.558	Std Err	1.028	Median	.425
Mode	2.013	Std Dev	4.709	Variance	22.171
Range	15.875	Minimum	-7.513	Maximum	8.362

Valid Cases 21

P4DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-8.35	2	9.5	9.5	9.5
-7.56	1	4.8	4.8	14.3
-4.38	3	14.3	14.3	28.6
-3.59	2	9.5	9.5	38.1
-2.79	2	9.5	9.5	47.6
-2.00	1	4.8	4.8	52.4
-1.21	1	4.8	4.8	57.1
-.41	1	4.8	4.8	61.9
1.17	2	9.5	9.5	71.4
3.56	1	4.8	4.8	76.2
7.52	2	9.5	9.5	85.7
8.32	2	9.5	9.5	95.2
16.26	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P4DELTA

Mean	.003	Std Err	1.408	Median	-2.000
Mode	-4.381	Std Dev	6.451	Variance	41.622
Range	24.606	Minimum	-8.350	Maximum	16.256

Valid Cases 21

P5DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-13.54	1	4.8	4.8	4.8
-8.77	1	4.8	4.8	9.5
-7.98	2	9.5	9.5	19.0
-7.19	1	4.8	4.8	23.8
-6.39	2	9.5	9.5	33.3
-4.81	1	4.8	4.8	38.1
-4.01	1	4.8	4.8	42.9
-2.43	2	9.5	9.5	52.4
-1.63	1	4.8	4.8	57.1
.75	1	4.8	4.8	61.9
1.54	1	4.8	4.8	66.7
2.34	1	4.8	4.8	71.4
3.92	1	4.8	4.8	76.2
5.51	2	9.5	9.5	85.7
14.62	1	4.8	4.8	90.5
17.42	1	4.8	4.8	95.2
18.21	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P5DELTA

Mean	-.082	Std Err	1.934	Median	-2.425
Mode	-7.981	Std Dev	8.862	Variance	78.533
Range	31.750	Minimum	-13.538	Maximum	18.213

Valid Cases 21

P6DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-13.00	1	4.8	4.8	4.8
-11.41	1	4.8	4.8	9.5
-9.83	1	4.8	4.8	14.3
-6.65	1	4.8	4.8	19.0
-5.86	3	14.3	14.3	33.3
-5.06	1	4.8	4.8	38.1
-4.27	1	4.8	4.8	42.9
-1.89	1	4.8	4.8	47.6
-.30	2	9.5	9.5	57.1
.49	2	9.5	9.5	66.7
1.29	1	4.8	4.8	71.4
2.87	2	9.5	9.5	81.0
4.46	1	4.8	4.8	85.7
6.84	2	9.5	9.5	95.2
9.22	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P6DELTA

Mean	-1.661	Std Err	1.336	Median	-.300
Mode	-5.856	Std Dev	6.123	Variance	37.496
Range	22.225	Minimum	-13.000	Maximum	9.225

Valid Cases 21

P7DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-9.77	1	4.8	4.8	4.8
-8.98	1	4.8	4.8	9.5
-8.18	1	4.8	4.8	14.3
-5.80	1	4.8	4.8	19.0
-5.01	1	4.8	4.8	23.8
-2.63	1	4.8	4.8	28.6
-1.04	1	4.8	4.8	33.3
-.24	3	14.3	14.3	47.6
.55	3	14.3	14.3	61.9
2.93	2	9.5	9.5	71.4
4.52	2	9.5	9.5	81.0
6.11	1	4.8	4.8	85.7
6.90	1	4.8	4.8	90.5
7.69	2	9.5	9.5	100.0
TOTAL	21	100.0	100.0	

P7DELTA

Mean	.134	Std Err	1.167	Median	.550
Mode	-.244	Std Dev	5.346	Variance	28.580
Range	17.463	Minimum	-9.769	Maximum	7.694

Valid Cases 21

P8DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-15.71	1	4.8	4.8	4.8
-14.92	1	4.8	4.8	9.5
-11.74	1	4.8	4.8	14.3
-8.57	1	4.8	4.8	19.0
-5.39	2	9.5	9.5	28.6
-2.22	2	9.5	9.5	38.1
-1.43	1	4.8	4.8	42.9
.96	3	14.3	14.3	57.1
2.54	1	4.8	4.8	61.9
4.13	2	9.5	9.5	71.4
5.72	1	4.8	4.8	76.2
6.51	1	4.8	4.8	81.0
8.10	1	4.8	4.8	85.7
8.89	1	4.8	4.8	90.5
9.69	1	4.8	4.8	95.2
16.04	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P8DELTA

Mean	.049	Std Err	1.803	Median	.956
Mode	.956	Std Dev	8.261	Variance	68.251
Range	31.750	Minimum	-15.713	Maximum	16.037

Valid Cases 21

P9DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-14.83	1	4.8	4.8	4.8
-13.24	2	9.5	9.5	14.3
-7.69	1	4.8	4.8	19.0
-6.10	1	4.8	4.8	23.8
-2.93	1	4.8	4.8	28.6
-2.13	1	4.8	4.8	33.3
-1.34	1	4.8	4.8	38.1
.25	1	4.8	4.8	42.9
1.04	1	4.8	4.8	47.6
2.63	1	4.8	4.8	52.4
3.42	1	4.8	4.8	57.1
4.22	1	4.8	4.8	61.9
5.81	2	9.5	9.5	71.4
6.60	2	9.5	9.5	81.0
7.39	1	4.8	4.8	85.7
9.77	2	9.5	9.5	95.2
10.57	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P9DELTA

Mean	.590	Std Err	1.707	Median	2.631
Mode	-13.244	Std Dev	7.824	Variance	61.213
Range	25.400	Minimum	-14.831	Maximum	10.569

Valid Cases 21

P10DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-17.04	1	4.8	4.8	4.8
-16.25	1	4.8	4.8	9.5
-13.08	1	4.8	4.8	14.3
-8.31	1	4.8	4.8	19.0
-5.14	1	4.8	4.8	23.8
-4.34	1	4.8	4.8	28.6
-3.55	1	4.8	4.8	33.3
-1.17	1	4.8	4.8	38.1
.42	2	9.5	9.5	47.6
2.01	2	9.5	9.5	57.1
5.18	3	14.3	14.3	71.4
6.77	1	4.8	4.8	76.2
7.56	1	4.8	4.8	81.0
9.15	1	4.8	4.8	85.7
10.74	2	9.5	9.5	95.2
11.53	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P10DELTA

Mean	.381	Std Err	1.884	Median	2.006
Mode	5.181	Std Dev	8.631	Variance	74.501
Range	28.575	Minimum	-17.044	Maximum	11.531

Valid Cases 21

P11DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-15.16	1	4.8	4.8	4.8
-14.37	1	4.8	4.8	9.5
-8.81	1	4.8	4.8	14.3
-7.23	1	4.8	4.8	19.0
-5.64	1	4.8	4.8	23.8
-4.84	1	4.8	4.8	28.6
-1.67	2	9.5	9.5	38.1
-.08	2	9.5	9.5	47.6
.71	2	9.5	9.5	57.1
1.51	1	4.8	4.8	61.9
3.09	1	4.8	4.8	66.7
3.89	1	4.8	4.8	71.4
7.06	1	4.8	4.8	76.2
7.86	1	4.8	4.8	81.0
9.44	1	4.8	4.8	85.7
10.24	1	4.8	4.8	90.5
11.03	1	4.8	4.8	95.2
12.62	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P11DELTA

Mean	.410	Std Err	1.717	Median	.712
Mode	-1.669	Std Dev	7.868	Variance	61.900
Range	27.781	Minimum	-15.163	Maximum	12.619

Valid Cases 21

P12DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-14.53	1	4.8	4.8	4.8
-10.56	1	4.8	4.8	9.5
-8.18	2	9.5	9.5	19.0
-5.80	1	4.8	4.8	23.8
-4.21	1	4.8	4.8	28.6
-3.42	2	9.5	9.5	38.1
-1.83	1	4.8	4.8	42.9
-1.04	2	9.5	9.5	52.4
-.24	1	4.8	4.8	57.1
2.14	1	4.8	4.8	61.9
2.93	1	4.8	4.8	66.7
4.52	1	4.8	4.8	71.4
6.11	2	9.5	9.5	81.0
9.28	1	4.8	4.8	85.7
10.87	1	4.8	4.8	90.5
11.66	1	4.8	4.8	95.2
12.46	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P12DELTA

Mean	.172	Std Err	1.647	Median	-1.038
Mode	-8.181	Std Dev	7.549	Variance	56.995
Range	26.987	Minimum	-14.531	Maximum	12.456

Valid Cases 21

P13DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-7.10	1	4.8	4.8	4.8
-6.31	1	4.8	4.8	9.5
-4.72	2	9.5	9.5	19.0
-3.92	1	4.8	4.8	23.8
-3.13	3	14.3	14.3	38.1
-2.34	1	4.8	4.8	42.9
.04	2	9.5	9.5	52.4
.84	1	4.8	4.8	57.1
1.63	1	4.8	4.8	61.9
2.42	2	9.5	9.5	71.4
3.22	1	4.8	4.8	76.2
4.81	1	4.8	4.8	81.0
5.60	1	4.8	4.8	85.7
6.39	2	9.5	9.5	95.2
7.98	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P13DELTA

Mean	.157	Std Err	.988	Median	.044
Mode	-3.131	Std Dev	4.527	Variance	20.494
Range	15.081	Minimum	-7.100	Maximum	7.981

Valid Cases 21

P14DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-13.12	1	4.8	4.8	4.8
-8.36	1	4.8	4.8	9.5
-7.56	1	4.8	4.8	14.3
-5.18	2	9.5	9.5	23.8
-3.59	1	4.8	4.8	28.6
-2.80	2	9.5	9.5	38.1
-1.21	2	9.5	9.5	47.6
.37	3	14.3	14.3	61.9
1.17	1	4.8	4.8	66.7
2.76	1	4.8	4.8	71.4
3.55	1	4.8	4.8	76.2
4.34	1	4.8	4.8	81.0
7.52	1	4.8	4.8	85.7
8.31	1	4.8	4.8	90.5
9.11	1	4.8	4.8	95.2
9.90	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P14DELTA

Mean	-.154	Std Err	1.320	Median	.375
Mode	.375	Std Dev	6.047	Variance	36.563
Range	23.019	Minimum	-13.119	Maximum	9.900

Valid Cases 21

P15DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-19.88	1	4.8	4.8	4.8
-11.15	1	4.8	4.8	9.5
-8.77	2	9.5	9.5	19.0
-7.18	2	9.5	9.5	28.6
-2.42	1	4.8	4.8	33.3
-.83	2	9.5	9.5	42.9
-.04	2	9.5	9.5	52.4
.76	1	4.8	4.8	57.1
1.55	1	4.8	4.8	61.9
2.34	1	4.8	4.8	66.7
3.14	1	4.8	4.8	71.4
5.52	1	4.8	4.8	76.2
7.90	2	9.5	9.5	85.7
10.28	2	9.5	9.5	95.2
12.66	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P15DELTA

Mean	-.226	Std Err	1.778	Median	-.038
Mode	-8.769	Std Dev	8.149	Variance	66.400
Range	32.544	Minimum	-19.881	Maximum	12.662

Valid Cases 21

P16DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-19.13	1	4.8	4.8	4.8
-12.78	1	4.8	4.8	9.5
-11.99	1	4.8	4.8	14.3
-10.40	1	4.8	4.8	19.0
-8.02	2	9.5	9.5	28.6
-7.23	1	4.8	4.8	33.3
-6.43	1	4.8	4.8	38.1
-3.26	1	4.8	4.8	42.9
-2.46	1	4.8	4.8	47.6
.71	3	14.3	14.3	61.9
1.51	1	4.8	4.8	66.7
5.47	1	4.8	4.8	71.4
6.27	1	4.8	4.8	76.2
7.06	2	9.5	9.5	85.7
9.44	1	4.8	4.8	90.5
22.94	1	4.8	4.8	95.2
24.52	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P16DELTA

Mean	-.157	Std Err	2.395	Median	.712
Mode	.712	Std Dev	10.975	Variance	120.457
Range	43.656	Minimum	-19.131	Maximum	24.525

Valid Cases 21

P17DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-31.04	1	4.8	4.8	4.8
-24.69	1	4.8	4.8	9.5
-12.78	2	9.5	9.5	19.0
-10.40	2	9.5	9.5	28.6
-7.23	1	4.8	4.8	33.3
-5.64	1	4.8	4.8	38.1
-4.05	1	4.8	4.8	42.9
-2.46	1	4.8	4.8	47.6
-1.67	1	4.8	4.8	52.4
-.08	1	4.8	4.8	57.1
3.09	2	9.5	9.5	66.7
3.89	1	4.8	4.8	71.4
6.27	1	4.8	4.8	76.2
11.83	1	4.8	4.8	81.0
12.62	1	4.8	4.8	85.7
13.41	2	9.5	9.5	95.2
15.79	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P17DELTA

Mean	-1.896	Std Err	2.731	Median	-1.669
Mode	-12.781	Std Dev	12.513	Variance	156.574
Range	46.831	Minimum	-31.037	Maximum	15.794

Valid Cases 21

P18DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-24.61	1	4.8	4.8	4.8
-23.02	1	4.8	4.8	9.5
-16.67	1	4.8	4.8	14.3
-15.88	1	4.8	4.8	19.0
-8.73	1	4.8	4.8	23.8
-7.94	1	4.8	4.8	28.6
-5.56	2	9.5	9.5	38.1
-4.76	1	4.8	4.8	42.9
-3.97	1	4.8	4.8	47.6
-3.18	1	4.8	4.8	52.4
-2.38	1	4.8	4.8	57.1
-1.59	1	4.8	4.8	61.9
-.79	1	4.8	4.8	66.7
-.00	1	4.8	4.8	71.4
1.59	1	4.8	4.8	76.2
2.38	1	4.8	4.8	81.0
7.14	1	4.8	4.8	85.7
11.91	1	4.8	4.8	90.5
12.70	1	4.8	4.8	95.2
23.02	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P18DELTA

Mean	-3.137	Std Err	2.492	Median	-3.175
Mode	-5.556	Std Dev	11.421	Variance	130.448
Range	47.625	Minimum	-24.606	Maximum	23.019

Valid Cases 21

P19DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-21.42	2	9.5	9.5	9.5
-15.87	1	4.8	4.8	14.3
-15.08	1	4.8	4.8	19.0
-9.52	2	9.5	9.5	28.6
-6.34	1	4.8	4.8	33.3
-4.76	2	9.5	9.5	42.9
-.79	3	14.3	14.3	57.1
.80	1	4.8	4.8	61.9
1.59	1	4.8	4.8	66.7
2.39	3	14.3	14.3	81.0
5.56	1	4.8	4.8	85.7
7.15	1	4.8	4.8	90.5
9.53	1	4.8	4.8	95.2
11.12	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P19DELTA

Mean	-3.244	Std Err	2.048	Median	-.787
Mode	-.787	Std Dev	9.385	Variance	88.073
Range	32.544	Minimum	-21.425	Maximum	11.119

Valid Cases 21

P20DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-8.49	1	4.8	4.8	4.8
-7.69	1	4.8	4.8	9.5
-6.90	1	4.8	4.8	14.3
-5.31	1	4.8	4.8	19.0
-4.52	2	9.5	9.5	28.6
-2.93	3	14.3	14.3	42.9
-.55	2	9.5	9.5	52.4
.24	1	4.8	4.8	57.1
1.04	1	4.8	4.8	61.9
2.63	3	14.3	14.3	76.2
5.01	1	4.8	4.8	81.0
7.39	1	4.8	4.8	85.7
8.18	1	4.8	4.8	90.5
8.97	2	9.5	9.5	100.0
TOTAL	21	100.0	100.0	

P20DELTA

Mean	.017	Std Err	1.199	Median	-.550
Mode	-2.931	Std Dev	5.494	Variance	30.188
Range	17.462	Minimum	-8.487	Maximum	8.975

Valid Cases 21

P21DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-10.53	1	4.8	4.8	4.8
-7.36	2	9.5	9.5	14.3
-5.77	1	4.8	4.8	19.0
-4.98	1	4.8	4.8	23.8
-4.18	1	4.8	4.8	28.6
-2.59	1	4.8	4.8	33.3
-1.80	1	4.8	4.8	38.1
-1.01	1	4.8	4.8	42.9
-.21	3	14.3	14.3	57.1
2.17	1	4.8	4.8	61.9
2.96	2	9.5	9.5	71.4
6.14	1	4.8	4.8	76.2
6.93	2	9.5	9.5	85.7
8.52	1	4.8	4.8	90.5
9.31	2	9.5	9.5	100.0
TOTAL	21	100.0	100.0	

P21DELTA

Mean	.430	Std Err	1.295	Median	-.213
Mode	-.213	Std Dev	5.933	Variance	35.195
Range	19.844	Minimum	-10.531	Maximum	9.312

Valid Cases 21

P22DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-13.41	1	4.8	4.8	4.8
-8.64	1	4.8	4.8	9.5
-6.26	1	4.8	4.8	14.3
-4.68	1	4.8	4.8	19.0
-3.88	1	4.8	4.8	23.8
-3.09	1	4.8	4.8	28.6
-2.29	1	4.8	4.8	33.3
-1.50	1	4.8	4.8	38.1
-.71	3	14.3	14.3	52.4
.09	1	4.8	4.8	57.1
.88	3	14.3	14.3	71.4
1.67	1	4.8	4.8	76.2
7.23	2	9.5	9.5	85.7
8.02	1	4.8	4.8	90.5
10.41	1	4.8	4.8	95.2
13.58	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P22DELTA

Mean	.239	Std Err	1.393	Median	-.706
Mode	-.706	Std Dev	6.383	Variance	40.740
Range	26.987	Minimum	-13.406	Maximum	13.581

Valid Cases 21

P23DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-10.49	1	4.8	4.8	4.8
-9.69	1	4.8	4.8	9.5
-8.11	2	9.5	9.5	19.0
-6.52	4	19.0	19.0	38.1
-4.93	1	4.8	4.8	42.9
-4.14	1	4.8	4.8	47.6
-.96	1	4.8	4.8	52.4
-.17	1	4.8	4.8	57.1
.62	1	4.8	4.8	61.9
3.01	1	4.8	4.8	66.7
4.59	1	4.8	4.8	71.4
5.39	1	4.8	4.8	76.2
6.18	1	4.8	4.8	81.0
6.97	1	4.8	4.8	85.7
9.36	1	4.8	4.8	90.5
11.74	1	4.8	4.8	95.2
20.47	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P23DELTA

Mean	-.207	Std Err	1.785	Median	-.963
Mode	-6.519	Std Dev	8.178	Variance	66.877
Range	30.956	Minimum	-10.488	Maximum	20.469

Valid Cases 21

P24DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-15.26	1	4.8	4.8	4.8
-13.67	1	4.8	4.8	9.5
-6.53	1	4.8	4.8	14.3
-4.94	1	4.8	4.8	19.0
-4.14	1	4.8	4.8	23.8
-3.35	1	4.8	4.8	28.6
-.97	2	9.5	9.5	38.1
-.17	1	4.8	4.8	42.9
.62	2	9.5	9.5	52.4
1.41	1	4.8	4.8	57.1
3.00	2	9.5	9.5	66.7
4.59	1	4.8	4.8	71.4
5.38	1	4.8	4.8	76.2
6.17	2	9.5	9.5	85.7
6.97	1	4.8	4.8	90.5
8.56	1	4.8	4.8	95.2
12.53	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P24DELTA

Mean	.430	Std Err	1.495	Median	.619
Mode	-.969	Std Dev	6.851	Variance	46.932
Range	27.781	Minimum	-15.256	Maximum	12.525

Valid Cases 21

P25DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-14.59	1	4.8	4.8	4.8
-13.79	1	4.8	4.8	9.5
-12.21	1	4.8	4.8	14.3
-11.41	1	4.8	4.8	19.0
-8.24	1	4.8	4.8	23.8
-4.27	1	4.8	4.8	28.6
-3.48	1	4.8	4.8	33.3
-1.89	3	14.3	14.3	47.6
-.30	1	4.8	4.8	52.4
2.08	1	4.8	4.8	57.1
2.88	1	4.8	4.8	61.9
3.67	1	4.8	4.8	66.7
4.46	1	4.8	4.8	71.4
6.05	1	4.8	4.8	76.2
9.22	1	4.8	4.8	81.0
11.61	1	4.8	4.8	85.7
13.99	1	4.8	4.8	90.5
15.57	1	4.8	4.8	95.2
20.34	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P25DELTA

Mean	.758	Std Err	2.146	Median	-.300
Mode	-1.888	Std Dev	9.832	Variance	96.669
Range	34.925	Minimum	-14.588	Maximum	20.337

Valid Cases 21

P26DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-19.64	1	4.8	4.8	4.8
-7.73	1	4.8	4.8	9.5
-5.35	2	9.5	9.5	19.0
-4.56	1	4.8	4.8	23.8
-3.76	2	9.5	9.5	33.3
-2.97	1	4.8	4.8	38.1
-2.18	1	4.8	4.8	42.9
-1.38	1	4.8	4.8	47.6
-.59	3	14.3	14.3	61.9
.21	1	4.8	4.8	66.7
1.00	1	4.8	4.8	71.4
1.79	1	4.8	4.8	76.2
2.59	1	4.8	4.8	81.0
5.76	1	4.8	4.8	85.7
6.56	1	4.8	4.8	90.5
7.35	1	4.8	4.8	95.2
9.73	1	4.8	4.8	100.0
TOTAL	21	100.0	100.0	

P26DELTA

Mean	-1.117	Std Err	1.361	Median	-.588
Mode	-.588	Std Dev	6.237	Variance	38.894
Range	29.369	Minimum	-19.638	Maximum	9.731

Valid Cases 21

APPENDIX C

PROBE DELTAS (PROBE VALUE - MEDIUM HEADFORM VALUE) FOR SUBJECTS IN THE SIZE MEDIUM PASGT HELMET

APPENDIX C

PROBE DELTAS (PROBE VALUE - MEDIUM HEADFORM VALUE) FOR SUBJECTS IN THE SIZE MEDIUM PASGT HELMET

Line 1: P1DELTA P2DELTA P3DELTA P4DELTA P5DELTA P6DELTA P7DELTA

Line 2: P8DELTA P9DELTA P10DELTA P11DELTA P12DELTA P13DELTA P14DELTA

Line 3: P15DELTA P16DELTA P17DELTA P18DELTA P19DELTA P20DELTA P21DELTA

Line 4: P22DELTA P23DELTA P24DELTA P25DELTA P26DELTA

Note: Delta Values Greater Than 2.5 mm Indicate Loss of Recommended Standoff at a Given Probe Location.

ID=1	-8.00	-4.01	-2.96	-11.98	16.34	-16.00	1.83
	-6.60	-9.46	-13.08	-11.90	-16.83	-4.64	-2.42
	-10.58	-6.64	-13.49	-15.50	3.05	8.77	7.22
	9.90	16.00	3.59	14.00	-8.94		
ID=5	2.32	.76	.21	-10.24	-11.44	14.96	-20.39
	-20.89	-18.21	-15.46	-11.11	-2.54	-9.41	-19.09
	-13.75	-7.43	-11.11	18.63	11.78	-15.04	-23.74
	-22.64	-15.75	-17.84	-4.26	12.49		
ID=7	7.08	-.83	-4.55	-3.89	-.33	-.92	1.83
	.5[illegible]	2.42	2.79	1.59	1.42	-3.85	-.04
	1.[illegible]	2.09	5.56	4.34	.67	-3.93	-.72
	.37	.92	2.01	-1.08	-.21		
ID=8	-[illegible]4	-.04	8.94	4.04	2.05	1.46	9.77
	[illegible]5	6.39	2.79	3.97	3.01	4.88	8.69
	[illegible]	-1.88	2.38	-2.01	-3.30	2.42	10.39
	5	4.89	2.80	.51	-1.80		
ID=9	-6.41	-4.01	-1.38	1.66	4.43	3.05	-2.14
	-6.60	-5.51	-1.97	.01	1.42	-7.03	-4.01
	-4.23	-1.88	-5.56	-5.18	-4.89	.04	4.04
	2.76	9.65	4.39	7.65	6.93		
ID=10	-4.03	-6.39	1.01	-1.51	12.37	-16.00	-2.14
	-1.04	-4.72	-5.14	-8.73	-12.07	-3.06	-.83
	-3.43	-3.46	-5.56	-9.94	-17.59	-1.55	.87
	1.96	7.27	2.01	5.27	-11.33		
ID=11	-2.44	-1.63	-10.11	2.46	-.33	11.78	-7.69
	-1.04	2.42	8.35	10.32	8.57	-9.41	-6.39
	-8.99	-1.08	3.17	-.42	7.02	-5.52	-4.69
	6.72	-1.46	5.97	2.09	9.31		
ID=15	-2.44	-1.63	-3.76	7.22	5.22	-10.44	-2.93
	-1.04	2.42	3.59	-.79	-7.31	-2.26	-3.21
	-1.84	6.06	0.0	-5.98	-11.24	2.42	2.46
	4.34	10.44	3.59	-.29	-8.15		
ID=16	3.11	-.04	-6.93	-7.07	-6.68	8.61	-6.11
	-8.19	-9.48	-13.08	-8.73	-4.13	-5.44	-3.21
	-3.43	.51	-4.76	-.42	7.81	-7.11	-4.69
	-5.98	-9.40	-8.31	-9.02	3.76		

ID=18	2.32	7.90	11.33	12.78	10.78	-19.18	11.36
	6.89	7.19	8.97	-.79	-4.93	13.61	8.69
	2.92	11.62	3.17	20.22	6.22	15.91	9.60
	7.52	6.47	9.18	2.89	-14.80		
ID=19	13.43	9.49	4.97	-2.31	-1.92	-4.89	4.21
	3.72	-.78	.41	-2.38	-4.13	11.23	7.11
	7.68	10.03	7.14	4.34	8.43	.04	-.72
	-5.18	-.67	-5.93	-11.40	-.21		
ID=20	-7.21	-7.18	-1.38	-.72	4.43	8.43	-1.34
	-3.43	.04	2.00	3.97	3.01	-3.06	-4.01
	-7.40	-8.05	-4.76	-6.77	-.13	1.83	.87
	1.17	.92	2.80	8.27	6.14		
ID=23	7.88	5.52	-2.96	-3.10	-4.30	4.64	-3.73
	-2.63	-2.34	-.38	.80	3.81	-3.06	-4.01
	-1.05	3.68	3.97	7.52	8.43	-3.14	-8.48
	-3.59	-8.61	-1.17	.51	2.17		
ID=24	1.52	3.93	6.94	4.04	-3.51	-.92	8.18
	3.72	2.42	2.00	3.18	.63	4.88	7.11
	5.30	.51	6.35	5.14	3.05	4.01	8.01
	1.96	-9.40	-6.73	-11.40	-10.53		
ID=25	3.11	2.34	6.56	.87	-3.51	-.92	8.18
	11.66	12.74	13.91	8.74	3.81	2.50	7.90
	8.47	3.68	12.70	-2.80	-1.71	2.42	4.84
	5.93	-3.84	8.36	-4.26	-4.18		
ID=27	1.52	-2.42	-8.52	-5.48	-5.89	5.43	-11.66
	-5.01	-3.93	-1.97	.80	-.16	-7.03	-10.36
	-5.02	.51	.79	7.52	7.02	-7.11	-10.24
	-9.15	-6.23	-8.31	-2.67	.58		
ID=28	2.32	2.34	-.58	2.46	51.26	-.92	5.80
	6.10	4.01	7.56	7.15	6.98	-.68	31.71
	4.51	3.68	7.94	7.52	-.13	2.42	8.81
	5.93	3.30	4.39	3.68	-1.01		
ID=29	3.91	3.93	3.39	-7.07	-7.48	-4.09	5.01
	2.92	1.63	-.38	-1.58	-3.34	4.88	7.90
	6.89	7.65	3.17	3.55	-4.89	-2.34	-.72
	-3.59	-2.26	-3.55	-7.43	-5.77		
ID=34	7.88	-5.59	-4.55	-10.24	-.33	.67	-2.93
	2.13	.84	2.00	4.77	3.81	-7.03	-4.01
	1.33	-1.08	2.38	1.17	-.92	-8.69	-7.07
	-2.80	-5.43	-.38	-.29	1.37		
ID=50	3.11	-4.01	-7.72	-8.66	-6.68	3.84	-3.73
	-6.60	-5.51	-1.17	.80	1.42	-5.44	-4.01
	-5.02	-1.88	3.17	2.76	3.84	-3.93	-3.89
	-4.39	-.67	-.38	2.09	2.96		
ID=52	-2.44	.76	6.56	4.84	4.43	-3.30	8.18
	-1.04	.04	-.38	-1.58	-2.54	5.67	3.93
	-2.64	2.89	-4.76	-6.77	-8.86	7.97	8.01
	1.96	-2.26	-1.96	-3.46	-5.77		

ID=53	9.46	6.31	6.56	7.22	2.05	-10.44	9.77
	3.72	4.01	.41	-2.38	-8.10	6.47	7.11
	2.92	6.06	.79	-2.01	-12.03	7.97	7.22
	1.17	2.51	-1.17	-2.67	-10.53		
ID=55	9.46	2.34	-2.17	-6.27	-5.89	3.05	-2.14
	-1.84	.04	-1.97	.01	4.60	4.09	.76
	2.13	2.09	2.38	18.63	7.81	-2.34	-7.07
	-9.15	-12.58	-13.87	-11.40	-3.39		
ID=56	-.86	3.93	1.01	.08	-2.71	-.13	-.55
	.54	.04	2.00	1.59	1.42	1.71	-.04
	2.92	2.09	.79	-2.01	-.92	.83	.87
	1.17	1.71	-.38	-1.88	-.21		
ID=57	10.26	2.34	-6.14	-6.27	-5.09	1.46	-9.28
	-8.19	-9.48	-9.91	-9.52	-7.31	-3.06	-5.59
	-2.64	5.27	-.79	5.93	.67	-7.90	-11.83
	-13.91	-7.81	-10.69	-6.64	-1.01		
ID=58	.73	-.83	-4.55	-5.48	-1.92	5.43	-6.90
	-9.78	-9.48	-5.94	-2.38	-.16	-4.64	-4.01
	-5.02	-1.88	-3.97	-3.59	2.26	-5.52	-9.45
	-9.15	-7.02	-11.49	.51	5.34		
ID=59	.73	-5.59	-9.31	-6.27	-4.30	3.84	-10.87
	.54	4.01	2.00	4.77	7.77	-8.61	-10.36
	-2.64	-1.08	5.56	10.69	8.61	-10.28	-9.45
	-3.59	-9.40	.42	-5.84	-2.59		
ID=60	14.22	6.31	.21	-13.42	-17.00	4.64	-3.73
	3.72	3.22	5.17	8.74	11.74	-3.06	-.83
	7.68	9.24	12.70	16.25	10.19	-8.69	-11.04
	-9.15	-18.93	-7.52	-11.40	-5.77		
ID=63	.73	4.72	5.77	.87	.46	-3.30	4.21
	-4.22	-7.10	-11.49	-10.31	-7.31	5.67	4.72
	1.33	2.89	-6.35	-2.01	-4.89	2.42	.07
	-7.56	-4.64	-11.49	-7.43	-6.56		
ID=64	3.91	2.34	3.39	-4.69	-2.71	.67	.24
	-1.84	-2.34	-1.97	.01	-.96	4.88	1.55
	3.71	2.89	2.38	2.76	2.26	.83	-1.51
	-4.39	-6.23	-3.55	-6.64	-.21		
ID=65	11.84	-1.63	-10.11	-12.63	-12.24	9.40	-14.04
	-10.57	-6.31	-.38	3.97	7.77	-8.61	-10.36
	-2.64	4.47	7.14	12.28	14.96	-11.08	-15.80
	-19.47	-16.54	-12.28	-16.96	-1.01		
ID=67	-.06	-1.63	-1.38	4.04	7.61	-2.51	-7.69
	-7.39	-7.10	-4.35	-1.58	.63	-6.23	-8.77
	-6.61	-.29	-3.97	-4.39	-2.51	.04	-6.28
	-2.01	4.89	-.38	3.68	-1.01		
ID=68	9.46	-.83	-8.52	-11.04	-7.48	4.64	-7.69
	-1.04	-.75	-2.76	1.59	1.42	-4.64	-.83
	5.30	13.21	8.73	18.63	8.61	-8.69	-9.45
	-8.36	-10.19	-8.31	-7.43	-1.80		

ID=69	5.49	1.55	-6.14	-7.86	-12.24	10.99	-2.93
	-5.01	-3.13	-1.97	.01	1.42	-3.85	-.04
	.84	3.68	4.76	11.49	12.57	-7.11	-7.86
	-6.77	-3.84	-7.52	-8.23	6.93		
ID=72	1.82	-2.42	-6.14	-6.27	-3.81	5.43	-3.73
	-3.43	-.75	1.21	3.18	2.22	-4.64	-1.63
	-1.05	1.30	5.56	6.72	7.02	-7.11	-3.89
	-6.77	-13.37	-1.17	-6.64	-.21		
ID=74	-3.24	-.83	-2.17	-5.48	.46	-.13	2.63
	7.69	7.98	8.35	5.56	3.01	-1.47	3.14
	3.71	-1.88	7.94	-2.01	-.92	-4.72	-3.10
	.37	1.71	5.97	2.09	14.07		
ID=78	-14.35	-4.80	5.15	17.54	27.45	-19.97	11.36
	10.07	7.98	5.35	.80	-5.89	4.09	3.14
	-3.43	-3.46	-13.49	-22.64	-27.91	15.12	16.74
	19.42	22.35	21.85	20.35	-5.77		
ID=82	-.86	-.04	-4.55	-3.10	1.26	-1.71	-6.90
	-5.81	-6.31	-8.32	-8.73	-7.31	-5.44	-6.39
	-4.23	.51	-3.97	.38	-4.09	-6.31	-7.86
	-7.56	7.27	-8.31	-1.88	-5.77		
ID=84	-.86	3.14	2.59	.08	-1.13	4.64	1.83
	5.31	8.77	6.76	10.32	10.95	.91	10.28
	8.47	2.89	7.94	5.14	13.37	.04	-3.10
	5.93	.12	5.18	3.68	3.76		
ID=85	-7.21	-2.42	-2.17	12.78	16.34	-17.59	1.83
	2.13	4.01	3.59	-2.38	-12.86	-5.44	-4.80
	-7.40	-11.40	-5.56	-12.33	-16.79	4.80	8.81
	13.87	13.62	13.91	9.24	-13.71		
ID=86	-3.24	-2.42	2.59	3.25	4.43	3.05	-3.73
	-11.36	-11.86	-13.08	-10.31	-6.51	-.68	-4.80
	-8.99	-8.23	-13.49	-11.53	-4.09	1.63	-3.10
	-4.39	1.71	-9.11	5.27	5.34		
ID=87	-4.83	-3.21	1.80	-1.51	.46	2.26	.24
	-2.63	-3.13	-.38	-.79	-.96	.12	-.83
	-.26	-8.23	-1.59	-4.39	11.78	3.21	2.46
	.37	-.67	3.59	4.47	2.96		
ID=88	2.32	-.83	-4.55	5.63	5.22	7.02	-7.69
	-5.81	-2.34	-.38	.01	-.16	-6.23	-8.77
	-.26	-2.67	-3.97	21.81	-2.51	-2.34	4.84
	-.42	4.09	4.39	8.44	7.72		
ID=90	3.91	10.28	4.97	3.25	-2.71	-4.09	11.36
	5.31	3.22	1.21	-4.76	-10.48	9.64	12.66
	8.47	9.24	.79	-5.18	-.13	4.01	7.22
	2.76	3.30	-.38	-1.88	-8.15		
ID=92	-8.00	-7.18	-10.11	4.84	9.19	4.64	-7.69
	-8.19	-6.31	-2.76	.80	1.42	-7.03	-8.77
	-12.16	-3.46	-8.73	-2.80	-1.71	-.76	.87
	4.34	9.65	5.18	11.62	6.93		

ID=95	-8.00	-5.59	2.59	.87	3.64	5.43	-2.14
	-3.43	-4.72	-6.73	-4.76	.63	-4.64	-4.80
	-7.40	-12.99	-7.94	-8.36	-.13	-.76	-1.51
	-2.01	-3.05	-1.17	8.44	7.72		
ID=97	-8.00	-.83	10.63	2.46	2.05	-2.51	4.21
	5.31	4.81	4.38	3.97	3.01	4.88	3.93
	.54	-.29	-3.17	-8.36	11.78	6.39	5.63
	6.72	5.68	7.86	10.82	8.52		
ID=98	-11.17	-8.77	2.59	4.04	6.02	-4.89	5.80
	3.72	5.60	5.97	.80	-3.34	-2.26	.76
	-1.84	-9.02	-2.38	-13.12	-12.03	6.39	6.42
	9.11	5.68	9.94	6.06	1.37		
ID=100	-8.00	-4.80	11.33	15.95	13.16	-16.00	14.53
	6.10	5.60	3.59	-3.17	-9.69	4.09	3.93
	-4.23	-10.61	-3.97	-17.88	-19.97	17.50	18.33
	14.66	15.21	10.74	3.68	-10.53		
ID=102	-4.83	.76	-.58	-.72	-4.30	.67	4.21
	.54	.04	-1.17	-.79	-.16	.91	4.72
	.54	.51	-.79	-3.59	-3.30	-1.55	.07
	-1.21	.12	.42	.51	1.37		
ID=103	7.08	5.52	2.59	.08	-1.92	-2.51	8.18
	2.13	1.63	4.38	.80	-1.75	5.67	8.69
	6.09	5.27	8.73	3.55	2.26	3.21	7.22
	3.55	12.03	3.59	-3.46	-8.94		
ID=107	-4.03	-.83	-.58	4.04	2.84	4.64	1.04
	-4.22	-5.51	-4.35	-2.38	-.16	-3.06	-3.21
	-8.19	-6.64	-9.53	-8.36	-5.68	.04	.87
	1.17	5.68	6.77	10.82	11.69		
ID=109	-6.41	-7.18	4.18	4.04	6.02	-1.71	5.01
	6.10	5.60	2.79	.01	1.42	-1.47	-1.63
	-3.43	-10.61	-3.17	-7.56	-6.48	5.59	4.84
	5.14	4.89	5.97	11.62	2.17		
ID=110	-16.73	-10.36	3.39	7.22	13.96	-12.03	5.80
	2.92	3.22	1.21	-1.58	-7.31	.91	1.55
	-3.43	-12.19	-6.35	-17.09	-22.35	11.15	11.98
	15.46	16.79	13.12	13.21	-4.98		

Number of cases read = 54

APPENDIX C

PSIBE DELTA FREQUENCIES AND DESCRIPTIVE STATISTICS
FOR SUBJECTS IN THE SIZE MEDIUM PASSIVE CONDITION

PSIDELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-16.73	1	1.9	1.9	1.9
-14.35	1	1.9	1.9	3.7
-11.17	1	1.9	1.9	5.6
-8.00	5	9.3	9.3	14.8
-7.21	2	3.7	3.7	18.5
-6.41	2	3.7	3.7	22.2
-4.83	2	3.7	3.7	25.9
-4.03	2	3.7	3.7	29.6
-3.24	2	3.7	3.7	33.3
-2.44	4	7.4	7.4	40.7
-.86	3	5.6	5.6	46.3
-.06	1	1.9	1.9	48.1
.73	3	5.6	5.6	53.7
1.52	3	5.6	5.6	59.3
2.32	4	7.4	7.4	66.7
3.11	3	5.6	5.6	72.2
3.91	3	5.6	5.6	77.8
5.49	1	1.9	1.9	79.6
7.08	2	3.7	3.7	83.3
7.88	2	3.7	3.7	87.0
9.46	3	5.6	5.6	92.6
10.26	1	1.9	1.9	94.4
11.84	1	1.9	1.9	96.3
13.43	1	1.9	1.9	98.1
14.22	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

PSIDELTA

Mean	.084	Std Err	.934	Median	.731
Mode	-8.000	Std Dev	6.866	Variance	47.148
Range	30.956	Minimum	-16.731	Maximum	14.225

Valid Cases 54

P2DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-10.36	1	1.9	1.9	1.9
-8.77	1	1.9	1.9	3.7
-7.18	3	5.6	5.6	9.3
-6.39	1	1.9	1.9	11.1
-5.59	3	5.6	5.6	16.7
-4.80	2	3.7	3.7	20.4
-4.01	3	5.6	5.6	25.9
-3.21	1	1.9	1.9	27.8
-2.42	4	7.4	7.4	35.2
-1.63	4	7.4	7.4	42.6
-.83	7	13.0	13.0	55.6
-.04	3	5.6	5.6	61.1
.76	3	5.6	5.6	66.7
1.55	1	1.9	1.9	68.5
2.34	5	9.3	9.3	77.8
3.14	1	1.9	1.9	79.6
3.93	3	5.6	5.6	85.2
4.72	1	1.9	1.9	87.0
5.52	2	3.7	3.7	90.7
6.31	2	3.7	3.7	94.4
7.90	1	1.9	1.9	96.3
9.49	1	1.9	1.9	98.1
10.28	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P2DELTA

Mean	-.449	Std Err	.624	Median	-.831
Mode	-.831	Std Dev	4.586	Variance	21.035
Range	20.638	Minimum	-10.356	Maximum	10.281

Valid Cases 54

P3DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-10.11	3	5.6	5.6	5.6
-9.31	1	1.9	1.9	7.4
-8.52	2	3.7	3.7	11.1
-7.72	1	1.9	1.9	13.0
-6.93	1	1.9	1.9	14.8
-6.14	3	5.6	5.6	20.4
-4.55	5	9.3	9.3	29.6
-3.76	1	1.9	1.9	31.5
-2.96	2	3.7	3.7	35.2
-2.17	3	5.6	5.6	40.7
-1.38	3	5.6	5.6	46.3
-.58	3	5.6	5.6	51.9
.21	2	3.7	3.7	55.6
1.01	2	3.7	3.7	59.3
1.80	1	1.9	1.9	61.1
2.59	5	9.3	9.3	70.4
3.39	3	5.6	5.6	75.9
4.18	1	1.9	1.9	77.8
4.97	2	3.7	3.7	81.5
5.77	1	1.9	1.9	83.3
6.56	3	5.6	5.6	88.9
8.15	1	1.9	1.9	90.7
8.94	2	3.7	3.7	94.4
10.53	1	1.9	1.9	96.3
11.33	2	3.7	3.7	100.0
TOTAL	54	100.0	100.0	

P3DELTA

Mean	-.155	Std Err	.795	Median	-.581
Mode	-4.550	Std Dev	5.844	Variance	34.158
Range	21.431	Minimum	-10.106	Maximum	11.325

Valid Cases 54

P4DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-13.42	1	1.9	1.9	1.9
-12.63	1	1.9	1.9	3.7
-11.04	1	1.9	1.9	5.6
-10.24	2	3.7	3.7	9.3
-8.66	1	1.9	1.9	11.1
-7.86	1	1.9	1.9	13.0
-7.07	2	3.7	3.7	16.7
-6.27	4	7.4	7.4	24.1
-5.48	3	5.6	5.6	29.6
-4.69	1	1.9	1.9	31.5
-3.89	1	1.9	1.9	33.3
-3.10	2	3.7	3.7	37.0
-2.31	1	1.9	1.9	38.9
-1.51	2	3.7	3.7	42.6
-.72	2	3.7	3.7	46.3
.08	3	5.6	5.6	51.9
.87	3	5.6	5.6	57.4
1.66	1	1.9	1.9	59.3
2.46	3	5.6	5.6	64.8
3.25	2	3.7	3.7	68.5
4.04	6	11.1	11.1	79.6
4.84	2	3.7	3.7	83.3
5.63	1	1.9	1.9	85.2
7.22	3	5.6	5.6	90.7
11.98	1	1.9	1.9	92.6
12.78	2	3.7	3.7	96.3
15.95	1	1.9	1.9	98.1
17.54	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

Mean	-.013	Std Err	.959	Median	.075
Mode	4.044	Std Dev	7.047	Variance	49.658
Range	30.956	Minimum	-13.419	Maximum	17.537

Valid Cases 54

P5DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-17.00	1	1.9	1.9	1.9
-12.24	2	3.7	3.7	5.6
-11.44	1	1.9	1.9	7.4
-7.48	2	3.7	3.7	11.1
-6.68	2	3.7	3.7	14.8
-5.89	2	3.7	3.7	18.5
-5.09	1	1.9	1.9	20.4
-4.30	3	5.6	5.6	25.9
-3.51	3	5.6	5.6	31.5
-2.71	3	5.6	5.6	37.0
-1.92	3	5.6	5.6	42.6
-1.13	1	1.9	1.9	44.4
-.33	3	5.6	5.6	50.0
.46	3	5.6	5.6	55.6
1.26	1	1.9	1.9	57.4
2.05	3	5.6	5.6	63.0
2.84	1	1.9	1.9	64.8
3.64	1	1.9	1.9	66.7
4.43	4	7.4	7.4	74.1
5.22	2	3.7	3.7	77.8
6.02	2	3.7	3.7	81.5
7.61	1	1.9	1.9	83.3
9.19	1	1.9	1.9	85.2
10.78	1	1.9	1.9	87.0
12.37	1	1.9	1.9	88.9
13.16	1	1.9	1.9	90.7
13.96	1	1.9	1.9	92.6
16.34	2	3.7	3.7	96.3
27.45	1	1.9	1.9	98.1
51.26	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P5DELTA

Mean	1.785	Std Err	1.437	Median	.066
Mode	4.431	Std Dev	10.557	Variance	111.457
Range	68.263	Minimum	-17.000	Maximum	51.262

Valid Cases 54

P6DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-19.97	1	1.9	1.9	1.9
-19.18	1	1.9	1.9	3.7
-17.59	1	1.9	1.9	5.6
-16.00	3	5.6	5.6	11.1
-12.03	1	1.9	1.9	13.0
-10.44	2	3.7	3.7	16.7
-4.89	2	3.7	3.7	20.4
-4.09	2	3.7	3.7	24.1
-3.30	2	3.7	3.7	27.8
-2.51	3	5.6	5.6	33.3
-1.71	2	3.7	3.7	37.0
-.92	4	7.4	7.4	44.4
-.13	2	3.7	3.7	48.1
.67	3	5.6	5.6	53.7
1.46	2	3.7	3.7	57.4
2.26	1	1.9	1.9	59.3
3.05	3	5.6	5.6	64.8
3.84	2	3.7	3.7	68.5
4.64	6	11.1	11.1	79.6
5.43	5	9.3	9.3	88.9
7.02	1	1.9	1.9	90.7
8.61	1	1.9	1.9	92.6
9.40	1	1.9	1.9	94.4
10.99	1	1.9	1.9	96.3
11.78	1	1.9	1.9	98.1
14.96	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P6DELTA

Mean	-.654	Std Err	1.083	Median	.669
Mode	4.637	Std Dev	7.955	Variance	63.289
Range	34.925	Minimum	-19.969	Maximum	14.956

Valid Cases 54

P7DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-20.39	1	1.9	1.9	1.9
-14.04	1	1.9	1.9	3.7
-11.66	1	1.9	1.9	5.6
-10.87	1	1.9	1.9	7.4
-9.28	1	1.9	1.9	9.3
-7.69	5	9.3	9.3	18.5
-6.90	2	3.7	3.7	22.2
-6.11	1	1.9	1.9	24.1
-3.73	5	9.3	9.3	33.3
-2.93	3	5.6	5.6	38.9
-2.14	4	7.4	7.4	46.3
-1.34	1	1.9	1.9	48.1
-.55	1	1.9	1.9	50.0
.24	2	3.7	3.7	53.7
1.04	1	1.9	1.9	55.6
1.83	4	7.4	7.4	63.0
2.63	1	1.9	1.9	64.8
4.21	4	7.4	7.4	72.2
5.01	2	3.7	3.7	75.9
5.80	3	5.6	5.6	81.5
8.18	4	7.4	7.4	88.9
9.77	2	3.7	3.7	92.6
11.36	3	5.6	5.6	98.1
14.53	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P7DELTA

Mean	-.109	Std Err	.989	Median	-.153
Mode	-7.694	Std Dev	7.264	Variance	52.773
Range	34.925	Minimum	-20.394	Maximum	14.531

Valid Cases 54

P8DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-20.89	1	1.9	1.9	1.9
-11.36	1	1.9	1.9	3.7
-10.57	1	1.9	1.9	5.6
-9.78	1	1.9	1.9	7.4
-8.19	3	5.6	5.6	13.0
-7.39	1	1.9	1.9	14.8
-6.60	3	5.6	5.6	20.4
-5.81	2	3.7	3.7	24.1
-5.01	2	3.7	3.7	27.8
-4.22	2	3.7	3.7	31.5
-3.43	3	5.6	5.6	37.0
-2.63	2	3.7	3.7	40.7
-1.84	2	3.7	3.7	44.4
-1.04	5	9.3	9.3	53.7
.54	4	7.4	7.4	61.1
2.13	3	5.6	5.6	66.7
2.92	2	3.7	3.7	70.4
3.72	5	9.3	9.3	79.6
5.31	3	5.6	5.6	85.2
6.10	3	5.6	5.6	90.7
6.89	1	1.9	1.9	92.6
7.69	1	1.9	1.9	94.4
10.07	1	1.9	1.9	96.3
10.86	1	1.9	1.9	98.1
11.66	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P8DELTA

Mean	-.823	Std Err	.856	Median	-1.044
Mode	-1.044	Std Dev	6.289	Variance	39.548
Range	32.544	Minimum	-20.888	Maximum	11.656

Valid Cases 54

P9DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-18.21	1	1.9	1.9	1.9
-11.86	1	1.9	1.9	3.7
-9.48	4	7.4	7.4	11.1
-7.10	2	3.7	3.7	14.8
-6.31	3	5.6	5.6	20.4
-5.51	3	5.6	5.6	25.9
-4.72	2	3.7	3.7	29.6
-3.93	1	1.9	1.9	31.5
-3.13	2	3.7	3.7	35.2
-2.34	3	5.6	5.6	40.7
- 75	3	5.6	5.6	46.3
.04	5	9.3	9.3	55.6
.84	1	1.9	1.9	57.4
1.63	2	3.7	3.7	61.1
2.42	4	7.4	7.4	68.5
3.22	3	5.6	5.6	74.1
4.01	4	7.4	7.4	81.5
4.81	1	1.9	1.9	83.3
5.60	3	5.6	5.6	88.9
6.39	1	1.9	1.9	90.7
7.19	1	1.9	1.9	92.6
7.98	2	3.7	3.7	96.3
8.77	1	1.9	1.9	98.1
12.74	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P9DELTA

Mean	-.632	Std Err	.819	Median	.044
Mode	.044	Std Dev	6.020	Variance	36.243
Range	30.956	Minimum	-18.213	Maximum	12.744

Valid Cases 54

P10DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-15.46	1	1.9	1.9	1.9
-13.08	3	5.6	5.6	7.4
-11.49	1	1.9	1.9	9.3
-9.91	1	1.9	1.9	11.1
-8.32	1	1.9	1.9	13.0
-6.73	1	1.9	1.9	14.8
-5.94	1	1.9	1.9	16.7
-5.14	1	1.9	1.9	18.5
-4.35	2	3.7	3.7	22.2
-2.76	2	3.7	3.7	25.9
-1.97	5	9.3	9.3	35.2
-1.17	2	3.7	3.7	38.9
-.38	6	11.1	11.1	50.0
.41	2	3.7	3.7	53.7
1.21	3	5.6	5.6	59.3
2.00	5	9.3	9.3	68.5
2.79	3	5.6	5.6	74.1
3.59	3	5.6	5.6	79.6
4.38	2	3.7	3.7	83.3
5.17	1	1.9	1.9	85.2
5.97	2	3.7	3.7	88.9
6.76	1	1.9	1.9	90.7
7.56	1	1.9	1.9	92.6
8.35	3	5.6	5.6	98.1
13.91	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P10DELTA

Mean	-.337	Std Err	.827	Median	.016
Mode	-.381	Std Dev	6.077	Variance	36.933
Range	29.369	Minimum	-15.463	Maximum	13.906

Valid Cases 54

P11DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-11.90	1	1.9	1.9	1.9
-11.11	1	1.9	1.9	3.7
-10.31	2	3.7	3.7	7.4
-9.52	1	1.9	1.9	9.3
-8.73	3	5.6	5.6	14.8
-4.76	2	3.7	3.7	18.5
-3.17	1	1.9	1.9	20.4
-2.38	5	9.3	9.3	29.6
-1.58	4	7.4	7.4	37.0
-.79	4	7.4	7.4	44.4
.01	6	11.1	11.1	55.6
.80	7	13.0	13.0	68.5
1.59	3	5.6	5.6	74.1
3.18	2	3.7	3.7	77.8
3.97	4	7.4	7.4	85.2
4.77	2	3.7	3.7	88.9
5.56	1	1.9	1.9	90.7
7.15	1	1.9	1.9	92.6
8.74	2	3.7	3.7	96.3
10.32	2	3.7	3.7	100.0
TOTAL	54	100.0	100.0	

P11DELTA

Mean	-.376	Std Err	.718	Median	.006
Mode	.800	Std Dev	5.274	Variance	27.811
Range	22.225	Minimum	-11.900	Maximum	10.325

Valid Cases 54

P12DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-16.83	1	1.9	1.9	1.9
-12.86	1	1.9	1.9	3.7
-12.07	1	1.9	1.9	5.6
-10.48	1	1.9	1.9	7.4
-9.69	1	1.9	1.9	9.3
-8.89	1	1.9	1.9	11.1
-8.10	1	1.9	1.9	13.0
-7.31	5	9.3	9.3	22.2
-6.51	1	1.9	1.9	24.1
-4.93	1	1.9	1.9	25.9
-4.13	2	3.7	3.7	29.6
-3.34	2	3.7	3.7	33.3
-2.54	2	3.7	3.7	37.0
-1.75	1	1.9	1.9	38.9
-.96	2	3.7	3.7	42.6
-.16	5	9.3	9.3	51.9
.63	3	5.6	5.6	57.4
1.42	8	14.8	14.8	72.2
2.22	1	1.9	1.9	74.1
3.01	4	7.4	7.4	81.5
3.81	3	5.6	5.6	87.0
4.60	1	1.9	1.9	88.9
6.98	1	1.9	1.9	90.7
7.77	2	3.7	3.7	94.4
8.57	1	1.9	1.9	96.3
10.95	1	1.9	1.9	98.1
11.74	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P12DELTA

Mean	-1.000	Std Err	.819	Median	-.163
Mode	1.425	Std Dev	6.020	Variance	36.243
Range	28.575	Minimum	-16.831	Maximum	11.744

Valid Cases 54

P13DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-9.41	2	3.7	3.7	3.7
-8.61	2	3.7	3.7	7.4
-7.03	4	7.4	7.4	14.8
-6.23	2	3.7	3.7	18.5
-5.44	4	7.4	7.4	25.9
-4.64	5	9.3	9.3	35.2
-3.85	2	3.7	3.7	38.9
-3.06	6	11.1	11.1	50.0
-2.26	2	3.7	3.7	53.7
-1.47	2	3.7	3.7	57.4
-.68	2	3.7	3.7	61.1
.12	1	1.9	1.9	63.0
.91	3	5.6	5.6	68.5
1.71	1	1.9	1.9	70.4
2.50	1	1.9	1.9	72.2
4.09	3	5.6	5.6	77.8
4.88	5	9.3	9.3	87.0
5.67	3	5.6	5.6	92.6
6.47	1	1.9	1.9	94.4
9.64	1	1.9	1.9	96.3
11.23	1	1.9	1.9	98.1
13.61	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P13DELTA

Mean	-1.013	Std Err	.747	Median	-2.659
Mode	-3.056	Std Dev	5.488	Variance	30.114
Range	23.019	Minimum	-9.406	Maximum	13.612

Valid Cases 54

P14DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-19.09	1	1.9	1.9	1.9
-10.36	3	5.6	5.6	7.4
-8.77	3	5.6	5.6	13.0
-6.39	2	3.7	3.7	16.7
-5.59	1	1.9	1.9	18.5
-4.80	3	5.6	5.6	24.1
-4.01	6	11.1	11.1	35.2
-3.21	3	5.6	5.6	40.7
-2.42	1	1.9	1.9	42.6
-1.63	2	3.7	3.7	46.3
-.83	4	7.4	7.4	53.7
-.04	3	5.6	5.6	59.3
.76	2	3.7	3.7	63.0
1.55	2	3.7	3.7	66.7
3.14	2	3.7	3.7	70.4
3.93	3	5.6	5.6	75.9
4.72	2	3.7	3.7	79.6
7.11	3	5.6	5.6	85.2
7.90	2	3.7	3.7	88.9
8.69	3	5.6	5.6	94.4
10.28	1	1.9	1.9	96.3
12.66	1	1.9	1.9	98.1
31.71	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P14DELTA

Mean	-.038	Std Err	1.046	Median	-.831
Mode	-4.006	Std Dev	7.686	Variance	59.081
Range	50.800	Minimum	-19.088	Maximum	31.712

Valid Cases 54

P15DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-13.75	1	1.9	1.9	1.9
-12.16	1	1.9	1.9	3.7
-10.58	1	1.9	1.9	5.6
-8.99	2	3.7	3.7	9.3
-8.19	1	1.9	1.9	11.1
-7.40	3	5.6	5.6	16.7
-6.61	1	1.9	1.9	18.5
-5.02	3	5.6	5.6	24.1
-4.23	3	5.6	5.6	29.6
-3.43	5	9.3	9.3	38.9
-2.64	4	7.4	7.4	46.3
-1.84	2	3.7	3.7	50.0
-1.05	2	3.7	3.7	53.7
-.26	2	3.7	3.7	57.4
.54	3	5.6	5.6	63.0
1.33	3	5.6	5.6	68.5
2.13	1	1.9	1.9	70.4
2.92	3	5.6	5.6	75.9
3.71	3	5.6	5.6	81.5
4.51	1	1.9	1.9	83.3
5.30	2	3.7	3.7	87.0
6.09	1	1.9	1.9	88.9
6.89	1	1.9	1.9	90.7
7.68	2	3.7	3.7	94.4
8.47	3	5.6	5.6	100.0
TOTAL	54	100.0	100.0	

P15DELTA

Mean	-1.050	Std Err	.753	Median	-1.447
Mode	-3.431	Std Dev	5.534	Variance	30.622
Range	22.225	Minimum	-13.750	Maximum	8.475

Valid Cases 54

P16DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-12.99	1	1.9	1.9	1.9
-12.19	1	1.9	1.9	3.7
-11.40	1	1.9	1.9	5.6
-10.61	2	3.7	3.7	9.3
-9.02	1	1.9	1.9	11.1
-8.23	2	3.7	3.7	14.8
-7.43	1	1.9	1.9	16.7
-6.44	2	3.7	3.7	20.4
-5.05	1	1.9	1.9	22.2
-3.46	3	5.6	5.6	27.8
-2.67	1	1.9	1.9	29.6
-1.88	5	9.3	9.3	38.9
-1.08	3	5.6	5.6	44.4
-.29	2	3.7	3.7	48.1
.51	5	9.3	9.3	57.4
1.30	1	1.9	1.9	59.3
2.09	3	5.6	5.6	64.8
2.89	4	7.4	7.4	72.2
3.68	4	7.4	7.4	79.6
4.47	1	1.9	1.9	81.5
5.27	2	3.7	3.7	85.2
6.06	2	3.7	3.7	88.9
7.65	1	1.9	1.9	90.7
9.24	2	3.7	3.7	94.4
10.03	1	1.9	1.9	96.3
11.62	1	1.9	1.9	98.1
13.21	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P16DELTA

Mean	-.199	Std Err	.838	Median	.506
Mode	-1.875	Std Dev	6.161	Variance	37.961
Range	26.194	Minimum	-12.988	Maximum	13.206

Valid Cases 54

P17DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-13.49	3	5.6	5.6	5.6
-11.11	1	1.9	1.9	7.4
-9.53	1	1.9	1.9	9.3
-8.73	1	1.9	1.9	11.1
-7.94	1	1.9	1.9	13.0
-6.35	2	3.7	3.7	16.7
-5.56	3	5.6	5.6	22.2
-4.76	3	5.6	5.6	27.8
-3.97	5	9.3	9.3	37.0
-3.17	2	3.7	3.7	40.7
-2.38	1	1.9	1.9	42.6
-1.59	1	1.9	1.9	44.4
-.79	2	3.7	3.7	48.1
0.0	1	1.9	1.9	50.0
.79	4	7.4	7.4	57.4
2.38	4	7.4	7.4	64.8
3.17	4	7.4	7.4	72.2
3.97	1	1.9	1.9	74.1
4.76	1	1.9	1.9	75.9
5.56	3	5.6	5.6	81.5
6.35	1	1.9	1.9	83.3
7.14	2	3.7	3.7	87.0
7.94	3	5.6	5.6	92.6
8.73	2	3.7	3.7	96.3
12.70	2	3.7	3.7	100.0
TOTAL	54	100.0	100.0	

P17DELTA

Mean	-.279	Std Err	.886	Median	.397
Mode	-3.969	Std Dev	6.513	Variance	42.418
Range	26.194	Minimum	-13.494	Maximum	12.700

Valid Cases 54

P18DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-22.64	1	1.9	1.9	1.9
-17.88	1	1.9	1.9	3.7
-17.09	1	1.9	1.9	5.6
-15.50	1	1.9	1.9	7.4
-13.12	1	1.9	1.9	9.3
-12.33	1	1.9	1.9	11.1
-11.53	1	1.9	1.9	13.0
-9.94	1	1.9	1.9	14.8
-8.36	3	5.6	5.6	20.4
-7.56	1	1.9	1.9	22.2
-6.77	2	3.7	3.7	25.9
-5.98	1	1.9	1.9	27.8
-5.18	2	3.7	3.7	31.5
-4.39	2	3.7	3.7	35.2
-3.59	2	3.7	3.7	38.9
-2.80	2	3.7	3.7	42.6
-2.01	5	9.3	9.3	51.9
-.42	2	3.7	3.7	55.6
.38	1	1.9	1.9	57.4
1.17	1	1.9	1.9	59.3
2.76	2	3.7	3.7	63.0
3.55	2	3.7	3.7	66.7
4.34	2	3.7	3.7	70.4
5.14	2	3.7	3.7	74.1
5.93	1	1.9	1.9	75.9
6.72	1	1.9	1.9	77.8
7.52	3	5.6	5.6	83.3
10.69	1	1.9	1.9	85.2
11.49	1	1.9	1.9	87.0
12.28	1	1.9	1.9	88.9
16.25	1	1.9	1.9	90.7
18.63	3	5.6	5.6	96.3
20.22	1	1.9	1.9	98.1
21.81	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P18DELTA

Mean	.037	Std Err	1.378	Median	-2.006
Mode	-2.006	Std Dev	10.129	Variance	102.604
Range	44.450	Minimum	-22.644	Maximum	21.806

Valid Cases 54

P19DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-27.91	1	1.9	1.9	1.9
-22.35	1	1.9	1.9	3.7
-19.97	1	1.9	1.9	5.6
-17.59	1	1.9	1.9	7.4
-16.79	1	1.9	1.9	9.3
-12.03	2	3.7	3.7	13.0
-11.24	1	1.9	1.9	14.8
-8.86	1	1.9	1.9	16.7
-6.48	1	1.9	1.9	18.5
-5.68	1	1.9	1.9	20.4
-4.89	3	5.6	5.6	25.9
-4.09	2	3.7	3.7	29.6
-3.30	2	3.7	3.7	33.3
-2.51	2	3.7	3.7	37.0
-1.71	2	3.7	3.7	40.7
-.92	3	5.6	5.6	46.3
-.13	4	7.4	7.4	53.7
.67	2	3.7	3.7	57.4
2.26	3	5.6	5.6	63.0
3.05	2	3.7	3.7	66.7
3.84	1	1.9	1.9	68.5
5.43	2	3.7	3.7	72.2
6.22	1	1.9	1.9	74.1
7.02	3	5.6	5.6	79.6
7.81	2	3.7	3.7	83.3
8.61	2	3.7	3.7	87.0
10.19	1	1.9	1.9	88.9
11.78	3	5.6	5.6	94.4
12.57	1	1.9	1.9	96.3
13.37	1	1.9	1.9	98.1
14.96	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P19DELTA

Mean	-.492	Std Err	1.270	Median	-.125
Mode	-.125	Std Dev	9.334	Variance	87.129
Range	42.863	Minimum	-27.906	Maximum	14.956

Valid Cases 54

P20DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-15.04	1	1.9	1.9	1.9
-11.08	1	1.9	1.9	3.7
-10.28	1	1.9	1.9	5.6
-8.69	3	5.6	5.6	11.1
-7.90	1	1.9	1.9	13.0
-7.11	4	7.4	7.4	20.4
-6.31	1	1.9	1.9	22.2
-5.52	2	3.7	3.7	25.9
-4.72	1	1.9	1.9	27.8
-3.93	2	3.7	3.7	31.5
-3.14	1	1.9	1.9	33.3
-2.34	3	5.6	5.6	38.9
-1.55	2	3.7	3.7	42.6
-.76	2	3.7	3.7	46.3
.04	5	9.3	9.3	55.6
.83	3	5.6	5.6	61.1
1.63	1	1.9	1.9	63.0
2.42	5	9.3	9.3	72.2
3.21	2	3.7	3.7	75.9
4.01	2	3.7	3.7	79.6
4.80	1	1.9	1.9	81.5
5.59	1	1.9	1.9	83.3
6.39	2	3.7	3.7	87.0
7.97	2	3.7	3.7	90.7
8.77	1	1.9	1.9	92.6
11.15	1	1.9	1.9	94.4
15.12	1	1.9	1.9	96.3
15.91	1	1.9	1.9	98.1
17.50	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P20DELTA

Mean	-.095	Std Err	.929	Median	.037
Mode	.037	Std Dev	6.828	Variance	46.617
Range	32.544	Minimum	-15.044	Maximum	17.500

Valid Cases 54

P21DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-23.74	1	1.9	1.9	1.9
-15.80	1	1.9	1.9	3.7
-11.83	1	1.9	1.9	5.6
-11.04	1	1.9	1.9	7.4
-10.24	1	1.9	1.9	9.3
-9.45	3	5.6	5.6	14.8
-7.86	2	3.7	3.7	18.5
-7.07	2	3.7	3.7	22.2
-6.28	1	1.9	1.9	24.1
-5.48	1	1.9	1.9	25.9
-4.69	2	3.7	3.7	29.6
-3.89	2	3.7	3.7	33.3
-3.10	3	5.6	5.6	38.9
-1.51	2	3.7	3.7	42.6
-.72	3	5.6	5.6	48.1
.07	2	3.7	3.7	51.9
.87	5	9.3	9.3	61.1
2.46	2	3.7	3.7	64.8
4.04	1	1.9	1.9	66.7
4.84	3	5.6	5.6	72.2
5.63	1	1.9	1.9	74.1
6.42	1	1.9	1.9	75.9
7.22	4	7.4	7.4	83.3
8.01	2	3.7	3.7	87.0
8.81	2	3.7	3.7	90.7
9.60	1	1.9	1.9	92.6
10.39	1	1.9	1.9	94.4
11.98	1	1.9	1.9	96.3
16.74	1	1.9	1.9	98.1
18.33	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P21DELTA

Mean	-.087	Std Err	1.102	Median	.075
Mode	.869	Std Dev	8.100	Variance	65.604
Range	42.069	Minimum	-23.737	Maximum	18.331

Valid Cases 54

P22DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-22.64	1	1.9	1.9	1.9
-19.47	1	1.9	1.9	3.7
-13.91	1	1.9	1.9	5.6
-9.15	4	7.4	7.4	13.0
-8.36	1	1.9	1.9	14.8
-7.56	2	3.7	3.7	18.5
-6.77	2	3.7	3.7	22.2
-5.98	1	1.9	1.9	24.1
-5.18	1	1.9	1.9	25.9
-4.39	3	5.6	5.6	31.5
-3.59	3	5.6	5.6	37.0
-2.80	1	1.9	1.9	38.9
-2.01	2	3.7	3.7	42.6
-1.21	1	1.9	1.9	44.4
-.42	1	1.9	1.9	46.3
.37	3	5.6	5.6	51.9
1.17	4	7.4	7.4	59.3
1.96	3	5.6	5.6	64.8
2.76	2	3.7	3.7	68.5
3.55	1	1.9	1.9	70.4
4.34	2	3.7	3.7	74.1
5.14	1	1.9	1.9	75.9
5.93	3	5.6	5.6	81.5
6.72	2	3.7	3.7	85.2
7.52	1	1.9	1.9	87.0
9.11	2	3.7	3.7	90.7
9.90	1	1.9	1.9	92.6
13.87	1	1.9	1.9	94.4
14.66	1	1.9	1.9	96.3
15.46	1	1.9	1.9	98.1
19.42	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P22DELTA

Mean	-.154	Std Err	1.109	Median	.375
Mode	-9.150	Std Dev	8.150	Variance	66.428
Range	42.069	Minimum	-22.644	Maximum	19.425

Valid Cases 54

P23DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-18.93	1	1.9	1.9	1.9
-16.54	1	1.9	1.9	3.7
-15.75	1	1.9	1.9	5.6
-13.37	1	1.9	1.9	7.4
-12.58	1	1.9	1.9	9.3
-10.19	1	1.9	1.9	11.1
-9.40	3	5.6	5.6	16.7
-8.61	1	1.9	1.9	18.5
-7.81	1	1.9	1.9	20.4
-7.02	1	1.9	1.9	22.2
-6.23	2	3.7	3.7	25.9
-5.43	1	1.9	1.9	27.8
-4.64	1	1.9	1.9	29.6
-3.84	2	3.7	3.7	33.3
-3.05	1	1.9	1.9	35.2
-2.26	2	3.7	3.7	38.9
-1.46	1	1.9	1.9	40.7
-.67	3	5.6	5.6	46.3
.12	2	3.7	3.7	50.0
.92	2	3.7	3.7	53.7
1.71	3	5.6	5.6	59.3
2.51	1	1.9	1.9	61.1
3.30	2	3.7	3.7	64.8
4.09	1	1.9	1.9	66.7
4.89	3	5.6	5.6	72.2
5.68	3	5.6	5.6	77.8
6.47	1	1.9	1.9	79.6
7.27	2	3.7	3.7	83.3
9.65	2	3.7	3.7	87.0
10.44	1	1.9	1.9	88.9
12.03	1	1.9	1.9	90.7
13.62	1	1.9	1.9	92.6
15.21	1	1.9	1.9	94.4
16.00	1	1.9	1.9	96.3
16.79	1	1.9	1.9	98.1
22.35	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P23DELTA

Mean	.345	Std Err	1.213	Median	.522
Mode	-9.400	Std Dev	8.913	Variance	79.442
Range	41.275	Minimum	-18.925	Maximum	22.350

Valid Cases 54

P24DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-17.84	1	1.9	1.9	1.9
-13.87	1	1.9	1.9	3.7
-12.28	1	1.9	1.9	5.6
-11.49	2	3.7	3.7	9.3
-10.69	1	1.9	1.9	11.1
-9.11	1	1.9	1.9	13.0
-8.31	4	7.4	7.4	20.4
-7.52	2	3.7	3.7	24.1
-6.73	1	1.9	1.9	25.9
-5.93	1	1.9	1.9	27.8
-3.55	2	3.7	3.7	31.5
-1.96	1	1.9	1.9	33.3
-1.17	4	7.4	7.4	40.7
-.38	5	9.3	9.3	50.0
.42	2	3.7	3.7	53.7
2.01	2	3.7	3.7	57.4
2.80	2	3.7	3.7	61.1
3.59	4	7.4	7.4	68.5
4.39	3	5.6	5.6	74.1
5.18	2	3.7	3.7	77.8
5.97	3	5.6	5.6	83.3
6.77	1	1.9	1.9	85.2
7.56	1	1.9	1.9	87.0
8.36	1	1.9	1.9	88.9
9.15	1	1.9	1.9	90.7
9.94	1	1.9	1.9	92.6
10.74	1	1.9	1.9	94.4
13.12	1	1.9	1.9	96.3
13.91	1	1.9	1.9	98.1
21.85	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P24DELTA

Mean	.081	Std Err	1.063	Median	.022
Mode	-.375	Std Dev	7.813	Variance	61.045
Range	39.688	Minimum	-17.838	Maximum	21.850

Valid Cases 54

P25DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-16.96	1	1.9	1.9	1.9
-11.40	4	7.4	7.4	9.3
-9.02	1	1.9	1.9	11.1
-8.23	1	1.9	1.9	13.0
-7.43	3	5.6	5.6	18.5
-6.64	3	5.6	5.6	24.1
-5.84	1	1.9	1.9	25.9
-4.26	2	3.7	3.7	29.6
-3.46	2	3.7	3.7	33.3
-2.67	2	3.7	3.7	37.0
-1.88	3	5.6	5.6	42.6
-1.08	1	1.9	1.9	44.4
-.29	2	3.7	3.7	48.1
.51	4	7.4	7.4	55.6
2.09	3	5.6	5.6	61.1
2.89	1	1.9	1.9	63.0
3.68	4	7.4	7.4	70.4
4.47	1	1.9	1.9	72.2
5.27	3	5.6	5.6	77.8
6.06	1	1.9	1.9	79.6
7.65	1	1.9	1.9	81.5
8.44	2	3.7	3.7	85.2
9.24	1	1.9	1.9	87.0
10.82	2	3.7	3.7	90.7
11.62	2	3.7	3.7	94.4
13.21	1	1.9	1.9	96.3
14.00	1	1.9	1.9	98.1
20.35	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P25DELTA

Mean	.418	Std Err	1.050	Median	.506
Mode	-11.400	Std Dev	7.718	Variance	59.572
Range	37.306	Minimum	-16.956	Maximum	20.350

Valid Cases 54

P26DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-14.50	1	1.9	1.9	1.9
-13.71	1	1.9	1.9	3.7
-11.33	1	1.9	1.9	5.6
-10.53	3	5.6	5.6	11.1
-8.94	2	3.7	3.7	14.8
-8.15	2	3.7	3.7	18.5
-6.56	1	1.9	1.9	20.4
-5.77	5	9.3	9.3	29.6
-4.98	1	1.9	1.9	31.5
-4.18	1	1.9	1.9	33.3
-3.39	1	1.9	1.9	35.2
-2.59	1	1.9	1.9	37.0
-1.80	2	3.7	3.7	40.7
-1.01	4	7.4	7.4	48.1
-.21	5	9.3	9.3	57.4
.58	1	1.9	1.9	59.3
1.37	3	5.6	5.6	64.8
2.17	2	3.7	3.7	68.5
2.96	2	3.7	3.7	72.2
3.76	2	3.7	3.7	75.9
5.34	2	3.7	3.7	79.6
6.14	1	1.9	1.9	81.5
6.93	3	5.6	5.6	87.0
7.72	2	3.7	3.7	90.7
8.52	1	1.9	1.9	92.6
9.31	1	1.9	1.9	94.4
11.69	1	1.9	1.9	96.3
12.49	1	1.9	1.9	98.1
14.07	1	1.9	1.9	100.0
TOTAL	54	100.0	100.0	

P26DELTA

Mean	-.609	Std Err	.931	Median	-.213
Mode	-5.769	Std Dev	6.843	Variance	46.831
Range	28.575	Minimum	-14.500	Maximum	14.075

Valid Cases 54

APPENDIX E

PROBE DELTAS (PROBE VALUE - LARGE HEADFORM VALUE)
FOR SUBJECTS IN THE SIZE LARGE PASGT HELMET

APPENDIX E

PROBE DELTAS (PROBE VALUE - LARGE HEADFORM VALUE) FOR SUBJECTS IN THE SIZE LARGE PASGT HELMET

Line 1: ID P1DELTA P2DELTA P3DELTA P4DELTA P5DELTA P6DELTA P7DELTA

Line 2: P8DELTA P9DELTA P10DELTA P11DELTA P12DELTA P13DELTA P14DELTA

Line 3: P15DELTA P16DELTA P17DELTA P18DELTA P19DELTA P20DELTA P21DELTA

Line 4: P22DELTA P23DELTA P24DELTA P25DELTA P26DELTA

Note: Delta Values Greater Than 2.5 mm Indicate Loss of Recommended Standoff at a Given Probe Location.

ID=4	-1.04	-5.23	-8.06	-11.49	-3.22	-7.43	-12.91
	3.67	8.82	5.51	7.89	3.55	.98	3.97
	-23.32	-8.19	.33	-13.49	-13.79	-11.53	-13.88
	-5.94	-6.89	2.04	-.96	-2.55		
ID=13	-1.04	.33	4.64	8.36	12.66	-6.64	6.14
	-5.06	-6.26	-7.19	-10.37	-9.15	1.37	.01
	-1.89	-4.22	-7.61	-13.49	-12.20	5.94	7.56
	4.38	6.61	1.25	-.16	-4.14		
ID=14	6.90	1.12	-8.06	-5.93	1.54	-9.02	-10.53
	2.88	-8.64	-7.19	-5.61	-8.36	-4.18	-7.93
	-6.65	-5.81	-8.40	-10.32	-11.41	-3.59	-9.91
	-6.73	-6.09	-6.69	-4.13	-4.93		
ID=17	11.66	-2.84	-4.09	-16.25	-9.57	-9.02	-9.73
	-5.86	-7.85	-7.99	-6.40	-7.56	-3.39	-3.17
	-.30	1.33	1.13	3.97	-3.47	-9.14	-10.70
	-11.49	-14.83	-9.86	-12.07	-12.87		
ID=21	19.60	-5.23	17.59	-15.46	-6.39	2.89	-23.22
	-15.38	-15.79	19.79	-7.19	-4.39	-16.88	-15.87
	-4.27	21.97	-1.26	7.14	4.47	-25.02	-24.19
	-20.22	-14.03	-17.80	-11.28	-4.93		
ID=22	-1.83	-2.84	2.26	4.39	5.51	-12.99	2.97
	-3.47	-7.06	-6.40	-4.02	-5.18	1.37	-.79
	-5.86	-10.58	-12.37	-20.64	-18.55	7.52	-20.22
	2.79	1.05	-1.93	-.96	-6.32		
ID=30	2.93	-2.84	-1.71	1.21	11.07	-9.81	-4.17
	-5.06	-5.47	-5.61	-4.02	-5.97	-1.80	-2.38
	-2.68	-5.02	-6.81	-6.35	-14.58	-.41	1.21
	2.00	1.84	-1.13	.63	-5.73		
ID=31	7.69	.33	-7.27	-11.49	-.84	-3.46	-4.97
	-5.06	-3.88	-.84	2.33	1.17	-4.98	-2.38
	1.29	-2.64	2.71	-3.97	-5.85	-10.73	-9.91
	-9.11	-10.06	-4.31	-5.72	-1.76		
ID=32	6.11	-10.78	-12.03	-13.08	-2.43	11.62	-15.29
	-10.62	-7.06	-4.02	2.33	5.93	-7.36	-14.28
	-7.44	-4.22	-2.84	3.17	12.41	-10.73	-13.88
	-11.49	-14.03	-13.04	-12.86	3.80		

ID=38	-12.18	-17.93	-8.86	2.01	22.18	-8.23	-12.11
	-10.62	-11.03	-15.93	-12.78	-9.15	-11.33	-14.38
	-18.54	-22.48	-21.89	-24.61	-23.31	-2.79	-2.76
	1.21	7.40	.44	18.09	3.01		
ID=41	.85	-3.64	-9.65	-13.87	-9.57	5.27	-8.94
	3.67	7.23	7.09	10.27	9.90	-6.86	-.79
	8.43	-.26	11.44	-1.89	4.47	-14.70	-11.49
	-1.97	-13.24	-1.93	-13.66	-1.76		
ID=44	.85	-9.99	-12.03	-15.46	-6.39	-4.26	-8.94
	-4.27	-2.29	-4.02	2.33	1.17	-10.83	-4.76
	-.30	-2.64	1.92	-.00	-1.88	-13.11	-13.08
	-13.08	-18.79	-11.45	-20.01	-10.49		
ID=46	-5.01	-7.61	-.13	1.21	9.48	-16.16	5.35
	2.88	5.64	3.92	.74	-4.39	-1.80	.01
	-2.68	-10.58	-2.05	-17.46	-20.14	1.97	4.38
	10.73	-1.33	6.01	.63	-7.31		
ID=47	-1.83	-7.61	-3.30	-9.11	1.54	7.65	-9.73
	-3.47	-5.47	-7.19	-2.43	1.17	-9.74	-3.17
	-7.44	-14.54	-10.78	-15.08	-1.09	-7.56	-6.73
	-9.11	-10.86	-9.07	-5.72	7.77		
ID=48	11.66	-1.26	-10.44	-10.69	1.54	3.68	-11.32
	-4.27	-.71	-.84	3.12	4.34	-8.15	-7.14
	-.30	-4.22	1.13	5.56	5.26	-13.11	-11.49
	-10.70	-12.44	-9.07	-10.48	-.17		
ID=61	6.11	-6.02	-14.41	-11.49	-2.43	-5.84	-14.49
	-10.62	-6.26	-4.81	-1.64	-2.01	-11.33	-12.69
	-1.89	-3.43	-1.26	-.00	-5.85	-13.91	-19.43
	-9.11	-13.24	-9.07	-7.31	-4.93		
ID=62	-8.98	-10.78	-9.65	-3.55	6.31	1.30	-10.53
	-4.27	-3.88	-2.43	-.05	.38	-4.98	-8.73
	-6.65	-18.51	-8.40	-16.67	-9.03	-8.35	-9.91
	-6.73	-10.86	-3.51	-4.13	5.39		
ID=70	14.84	3.51	-6.48	-15.46	-13.54	-1.08	-8.94
	-7.44	-3.88	-4.81	-.84	1.17	.58	-2.38
	3.67	3.71	4.30	3.17	3.67	-9.94	-13.88
	-14.67	-24.35	-18.59	-22.39	-10.49		
ID=73	8.49	1.12	.67	-2.76	1.54	-6.64	-4.17
	-6.65	-7.06	-8.78	-8.61	-8.97	.88	-3.17
	-2.68	-2.64	-8.40	-6.35	-3.47	-2.00	-8.14
	-8.32	-10.86	-11.45	-12.07	-8.11		
ID=75	-5.01	-7.61	5.43	-.38	3.92	-12.99	3.76
	-2.68	-3.88	-5.61	-4.02	7.52	-.21	-.79
	-5.06	-11.37	-12.37	-16.67	-15.38	2.76	2.00
	-.38	-4.81	-1.93	-4.13	-4.14		
ID=76	1.34	-4.43	3.05	-4.34	3.92	-4.26	3.76
	-1.89	-4.67	-4.81	-8.61	-4.39	.88	-2.38
	-5.06	-13.75	-4.81	-15.88	-9.03	3.86	.41
	.41	-2.92	-.34	-.96	-.96		

ID=77	-4.21	-8.40	-1.71	-9.90	-3.22	3.68	1.38
	-1.09	-.71	.74	1.84	1.96	-4.18	-3.17
	-4.27	-16.13	-.46	-14.29	1.29	-3.59	-5.94
	-9.11	-14.83	-4.31	-11.28	1.42		
ID=80	2.93	-2.05	-2.51	-5.93	-.04	.51	-6.56
	-.30	1.67	.74	3.12	3.85	-1.01	-7.14
	-6.65	-10.58	-7.61	-8.73	-1.88	-3.59	-1.97
	-1.17	-9.27	-4.31	-8.10	-.96		
ID=81	2.93	1.12	4.64	3.59	3.13	-10.61	1.38
	5.26	5.64	4.71	3.92	-.42	2.17	.01
	4.46	-4.22	3.51	-7.14	-6.64	3.56	2.00
	3.59	12.16	.46	-7.31	-11.28		
ID=93	12.46	-1.26	-4.89	-13.08	-5.60	-6.64	-10.53
	-1.89	-1.50	-4.81	-4.02	-6.77	-4.18	-3.17
	2.08	.54	2.71	7.94	-1.88	-7.56	-11.49
	-7.53	-6.09	-6.69	-11.28	-8.11		
ID=94	2.93	-2.05	-4.09	-2.76	6.31	-2.67	-8.94
	-16.97	-18.96	-19.10	-16.72	-14.71	-3.39	-7.14
	-10.62	-10.58	-13.16	-14.29	-9.82	-5.18	-8.32
	-10.70	-7.68	-13.83	-4.13	1.42		
ID=101	2.93	-1.26	-7.27	-4.34	-1.63	5.27	-7.35
	-11.41	-10.33	-9.58	-7.19	-5.18	-2.59	-3.96
	-9.83	-11.37	-13.16	-15.08	-5.85	-7.56	-7.53
	-6.73	-13.24	-11.45	-7.31	5.39		
ID=105	7.69	-2.05	-2.51	-9.11	-4.01	-6.64	-11.32
	-9.83	-12.61	-15.93	-11.16	-7.56	-4.98	-9.52
	-9.03	-10.58	-11.58	-6.35	-5.85	-8.35	-12.29
	-11.49	-9.27	-12.24	-7.31	-3.34		
ID=106	2.93	-.46	1.46	2.01	7.89	-3.46	2.97
	.49	-1.50	-2.43	-2.43	-5.97	2.96	1.59
	1.29	-7.40	-6.02	-14.29	-9.03	1.17	2.79
	1.21	-5.30	-.34	-5.72	-.17		
ID=108	.55	-6.02	-4.89	-6.73	-4.81	-3.46	3.76
	.49	-.71	-2.43	-.84	-3.59	-1.80	.01
	-2.68	12.44	-4.43	-10.32	-6.64	-1.21	1.21
	-1.97	-12.44	-3.51	-8.10	-3.34		

Number of cases read = 30

APPENDIX F

PROBE DELTA FREQUENCIES AND DESCRIPTIVE STATISTICS FOR SUBJECTS IN THE SIZE LARGE PASGT HELMET

APPENDIX F

PROBE DELTA FREQUENCIES AND DESCRIPTIVE STATISTICS FOR SUBJECTS IN THE SIZE LARGE PASGT HELMET

P1DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-12.15	1	3.3	3.3	3.3
-8.98	1	3.3	3.3	6.7
-5.01	2	6.7	6.7	13.3
-4.21	1	3.3	3.3	16.7
-1.83	2	6.7	6.7	23.3
-1.04	2	6.7	6.7	30.0
.55	3	10.0	10.0	40.0
1.34	1	3.3	3.3	43.3
2.93	6	20.0	20.0	63.3
6.11	2	6.7	6.7	70.0
6.90	1	3.3	3.3	73.3
7.69	2	6.7	6.7	80.0
8.49	1	3.3	3.3	83.3
11.66	2	6.7	6.7	90.0
12.46	1	3.3	3.3	93.3
14.84	1	3.3	3.3	96.7
19.60	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P1DELTA

Mean	3.090	Std Err	1.276	Median	2.931
Mode	2.931	Std Dev	6.990	Variance	48.856
Range	31.750	Minimum	-12.150	Maximum	19.600

Valid Cases 30

P2DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-17.93	1	3.3	3.3	3.3
-10.78	2	6.7	6.7	10.0
-9.99	1	3.3	3.3	13.3
-8.40	1	3.3	3.3	16.7
-7.61	3	10.0	10.0	26.7
-6.02	2	6.7	6.7	33.3
-5.23	2	6.7	6.7	40.0
-4.43	1	3.3	3.3	43.3
-3.64	1	3.3	3.3	46.7
-2.84	3	10.0	10.0	56.7
-2.05	3	10.0	10.0	66.7
-1.26	3	10.0	10.0	76.7
-.46	1	3.3	3.3	80.0
.33	2	6.7	6.7	86.7
1.12	3	10.0	10.0	96.7
3.51	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P2DELTA

Mean	-4.087	Std Err	.840	Median	-2.844
Mode	-7.606	Std Dev	4.603	Variance	21.190
Range	21.431	Minimum	-17.925	Maximum	3.506

Valid Cases 30

P3DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-17.59	1	3.3	3.3	3.3
-14.41	1	3.3	3.3	6.7
-12.03	2	6.7	6.7	13.3
-10.44	1	3.3	3.3	16.7
-9.65	2	6.7	6.7	23.3
-8.86	1	3.3	3.3	26.7
-8.06	2	6.7	6.7	33.3
-7.27	2	6.7	6.7	40.0
-6.48	1	3.3	3.3	43.3
-4.89	2	6.7	6.7	50.0
-4.09	2	6.7	6.7	56.7
-3.30	1	3.3	3.3	60.0
-2.51	2	6.7	6.7	66.7
-1.71	2	6.7	6.7	73.3
-.13	1	3.3	3.3	76.7
.67	1	3.3	3.3	80.0
1.46	1	3.3	3.3	83.3
2.26	1	3.3	3.3	86.7
3.05	1	3.3	3.3	90.0
4.64	2	6.7	6.7	96.7
5.43	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P3DELTA

Mean	-4.649	Std Err	1.077	Median	-4.491
Mode	-12.031	Std Dev	5.900	Variance	34.811
Range	23.019	Minimum	-17.588	Maximum	5.431

Valid Cases 30

P4DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-16.25	1	3.3	3.3	3.3
-15.46	3	10.0	10.0	13.3
-13.87	1	3.3	3.3	16.7
-13.08	2	6.7	6.7	23.3
-11.49	3	10.0	10.0	33.3
-10.69	1	3.3	3.3	36.7
-9.90	1	3.3	3.3	40.0
-9.11	2	6.7	6.7	46.7
-6.73	1	3.3	3.3	50.0
-5.93	2	6.7	6.7	56.7
-4.34	2	6.7	6.7	63.3
-3.55	1	3.3	3.3	66.7
-2.76	2	6.7	6.7	73.3
-.38	1	3.3	3.3	76.7
1.21	2	6.7	6.7	83.3
2.01	2	6.7	6.7	90.0
3.59	1	3.3	3.3	93.3
4.39	1	3.3	3.3	96.7
8.36	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P4DELTA

Mean	-6.328	Std Err	1.260	Median	-6.328
Mode	-15.456	Std Dev	6.903	Variance	47.655
Range	24.606	Minimum	-16.250	Maximum	8.356

Valid Cases 30

P5DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-13.84	1	3.3	3.3	3.3
-9.57	2	6.7	6.7	10.0
-6.39	2	6.7	6.7	16.7
-5.60	1	3.3	3.3	20.0
-4.81	1	3.3	3.3	23.3
-4.01	1	3.3	3.3	26.7
-3.22	2	6.7	6.7	33.3
-2.43	2	6.7	6.7	40.0
-1.63	1	3.3	3.3	43.3
-.84	1	3.3	3.3	46.7
-.04	1	3.3	3.3	50.0
1.54	4	13.3	13.3	63.3
3.13	1	3.3	3.3	66.7
3.92	2	6.7	6.7	73.3
5.51	1	3.3	3.3	76.7
6.31	2	6.7	6.7	83.3
7.89	1	3.3	3.3	86.7
9.48	1	3.3	3.3	90.0
11.07	1	3.3	3.3	93.3
12.66	1	3.3	3.3	96.7
22.18	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P5DELTA

Mean	.829	Std Err	1.365	Median	.750
Mode	1.544	Std Dev	7.476	Variance	55.893
Range	35.719	Minimum	-13.538	Maximum	22.181

Valid Cases 30

P6DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-16.16	1	3.3	3.3	3.3
-12.99	2	6.7	6.7	10.0
-10.61	1	3.3	3.3	13.3
-9.81	1	3.3	3.3	16.7
-9.02	2	6.7	6.7	23.3
-8.23	1	3.3	3.3	26.7
-7.43	1	3.3	3.3	30.0
-6.64	4	13.3	13.3	43.3
-5.84	1	3.3	3.3	46.7
-4.26	2	6.7	6.7	53.3
-3.46	3	10.0	10.0	63.3
-2.67	1	3.3	3.3	66.7
-1.08	1	3.3	3.3	70.0
.51	1	3.3	3.3	73.3
1.30	1	3.3	3.3	76.7
2.89	1	3.3	3.3	80.0
3.68	2	6.7	6.7	86.7
5.27	2	6.7	6.7	93.3
7.65	1	3.3	3.3	96.7
11.62	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P6DELTA

Mean	-3.648	Std Err	1.209	Median	-4.256
Mode	-6.638	Std Dev	6.620	Variance	43.828
Range	27.781	Minimum	-16.163	Maximum	11.619

Valid Cases 30

P7DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-23.22	1	3.3	3.3	3.3
-15.29	1	3.3	3.3	6.7
-14.49	1	3.3	3.3	10.0
-12.91	1	3.3	3.3	13.3
-12.11	1	3.3	3.3	16.7
-11.32	2	6.7	6.7	23.3
-10.83	3	10.0	10.0	33.3
-9.73	2	6.7	6.7	40.0
-8.94	4	13.3	13.3	53.3
-7.35	1	3.3	3.3	56.7
-6.56	1	3.3	3.3	60.0
-4.97	1	3.3	3.3	63.3
-4.17	2	6.7	6.7	70.0
1.38	2	6.7	6.7	76.7
2.97	2	6.7	6.7	83.3
3.76	3	10.0	10.0	93.3
5.35	1	3.3	3.3	96.7
6.14	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P7DELTA

Mean	-6.106	Std Err	1.340	Median	-8.938
Mode	-8.938	Std Dev	7.339	Variance	53.865
Range	29.369	Minimum	-23.225	Maximum	6.144

Valid Cases 30

P8DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-16.97	1	3.3	3.3	3.3
-15.38	1	3.3	3.3	6.7
-11.41	1	3.3	3.3	10.0
-10.62	3	10.0	10.0	20.0
-9.83	1	3.3	3.3	23.3
-7.44	1	3.3	3.3	26.7
-6.65	1	3.3	3.3	30.0
-5.86	1	3.3	3.3	33.3
-5.06	3	10.0	10.0	43.3
-4.27	3	10.0	10.0	53.3
-3.47	2	6.7	6.7	60.0
-2.68	1	3.3	3.3	63.3
-1.89	2	6.7	6.7	70.0
-1.09	1	3.3	3.3	73.3
-.30	1	3.3	3.3	76.7
.49	2	6.7	6.7	83.3
2.88	2	6.7	6.7	90.0
3.67	2	6.7	6.7	96.7
5.26	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P8DELTA

Mean	-4.295	Std Err	1.024	Median	-4.269
Mode	-10.619	Std Dev	5.611	Variance	31.480
Range	22.225	Minimum	-16.969	Maximum	5.256

Valid Cases 30

P9DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-18.96	1	3.3	3.3	3.3
-18.79	1	3.3	3.3	6.7
-12.61	1	3.3	3.3	10.0
-11.03	1	3.3	3.3	13.3
-10.23	1	3.3	3.3	16.7
-8.64	1	3.3	3.3	20.0
-7.85	1	3.3	3.3	23.3
-7.06	3	10.0	10.0	33.3
-6.26	2	6.7	6.7	40.0
-5.47	2	6.7	6.7	46.7
-4.67	1	3.3	3.3	50.0
-3.88	4	13.3	13.3	63.3
-2.29	1	3.3	3.3	66.7
-1.50	2	6.7	6.7	73.3
-.71	3	10.0	10.0	83.3
1.67	1	3.3	3.3	86.7
5.64	2	6.7	6.7	93.3
7.23	1	3.3	3.3	96.7
8.82	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P9DELTA

Mean	-4.278	Std Err	1.154	Median	-4.278
Mode	-3.881	Std Dev	6.322	Variance	39.964
Range	27.781	Minimum	-18.963	Maximum	8.819

Valid Cases 30

P10DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-19.10	1	3.3	3.3	3.3
-15.93	2	6.7	6.7	10.0
-9.58	1	3.3	3.3	13.3
-8.78	1	3.3	3.3	16.7
-7.99	1	3.3	3.3	20.0
-7.19	3	10.0	10.0	30.0
-6.40	1	3.3	3.3	33.3
-5.61	2	6.7	6.7	40.0
-4.81	4	13.3	13.3	53.3
-4.02	2	6.7	6.7	60.0
-2.43	3	10.0	10.0	70.0
-.84	2	6.7	6.7	76.7
.74	2	6.7	6.7	83.3
3.92	1	3.3	3.3	86.7
4.71	1	3.3	3.3	90.0
5.51	1	3.3	3.3	93.3
7.09	1	3.3	3.3	96.7
19.79	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P10DELTA

Mean	-3.675	Std Err	1.362	Median	-4.813
Mode	-4.813	Std Dev	7.460	Variance	55.647
Range	38.894	Minimum	-19.100	Maximum	19.794

Valid Cases 30

P11DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-16.72	1	3.3	3.3	3.3
-12.78	1	3.3	3.3	6.7
-11.16	1	3.3	3.3	10.0
-10.37	1	3.3	3.3	13.3
-7.19	2	6.7	6.7	20.0
-6.40	1	3.3	3.3	23.3
-5.61	3	10.0	10.0	33.3
-4.02	4	13.3	13.3	46.7
-2.43	2	6.7	6.7	53.3
-1.64	1	3.3	3.3	56.7
-.84	2	6.7	6.7	63.3
-.05	1	3.3	3.3	66.7
.74	1	3.3	3.3	70.0
1.54	1	3.3	3.3	73.3
2.33	3	10.0	10.0	83.3
3.12	2	6.7	6.7	90.0
3.92	1	3.3	3.3	93.3
7.86	1	3.3	3.3	96.7
10.27	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P11DELTA

Mean	-2.511	Std Err	1.086	Median	-2.431
Mode	-4.019	Std Dev	5.948	Variance	35.384
Range	26.988	Minimum	-16.719	Maximum	10.269

Valid Cases 30

P12DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-14.71	1	3.3	3.3	3.3
-9.15	2	6.7	6.7	10.0
-8.36	1	3.3	3.3	13.3
-7.56	2	6.7	6.7	20.0
-6.77	1	3.3	3.3	23.3
-5.97	3	10.0	10.0	33.3
-5.18	2	6.7	6.7	40.0
-4.39	3	10.0	10.0	50.0
-3.59	1	3.3	3.3	53.3
-2.01	1	3.3	3.3	56.7
-.42	1	3.3	3.3	60.0
.38	1	3.3	3.3	63.3
1.17	4	13.3	13.3	76.7
1.96	1	3.3	3.3	80.0
3.55	2	6.7	6.7	86.7
4.34	1	3.3	3.3	90.0
5.93	1	3.3	3.3	93.3
7.52	1	3.3	3.3	96.7
9.90	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P12DELTA

Mean	-2.297	Std Err	1.036	Median	-3.991
Mode	1.169	Std Dev	5.676	Variance	32.218
Range	24.606	Minimum	-14.706	Maximum	9.900

Valid Cases 30

P13DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-16.88	1	3.3	3.3	3.3
-11.33	2	6.7	6.7	10.0
-10.53	1	3.3	3.3	13.3
-9.74	1	3.3	3.3	16.7
-8.15	1	3.3	3.3	20.0
-7.36	1	3.3	3.3	23.3
-6.56	1	3.3	3.3	26.7
-4.98	3	10.0	10.0	36.7
-4.18	3	10.0	10.0	46.7
-3.39	2	6.7	6.7	53.3
-2.59	1	3.3	3.3	56.7
-1.80	3	10.0	10.0	66.7
-1.01	1	3.3	3.3	70.0
-.21	1	3.3	3.3	73.3
.58	4	13.3	13.3	86.7
1.37	2	6.7	6.7	93.3
2.17	1	3.3	3.3	96.7
2.96	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P13DELTA

Mean	-3.837	Std Err	.868	Median	-3.388
Mode	.581	Std Dev	4.752	Variance	22.581
Range	19.844	Minimum	-16.881	Maximum	2.962

Valid Cases 30

P14DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-15.87	1	3.3	3.3	3.3
-14.28	2	6.7	6.7	10.0
-12.69	1	3.3	3.3	13.3
-9.52	1	3.3	3.3	16.7
-8.73	1	3.3	3.3	20.0
-7.93	1	3.3	3.3	23.3
-7.14	3	10.0	10.0	33.3
-4.76	1	3.3	3.3	36.7
-3.96	1	3.3	3.3	40.0
-3.17	5	16.7	16.7	56.7
-2.38	4	13.3	13.3	70.0
-.79	3	10.0	10.0	80.0
.01	4	13.3	13.3	93.3
1.59	1	3.3	3.3	96.7
3.97	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P14DELTA

Mean	-4.518	Std Err	.911	Median	-3.169
Mode	-3.169	Std Dev	4.990	Variance	24.904
Range	19.844	Minimum	-15.869	Maximum	3.975

Valid Cases 30

P13DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-23.32	1	3.3	3.3	3.3
-18.86	1	3.3	3.3	6.7
-10.62	1	3.3	3.3	10.0
-9.83	1	3.3	3.3	13.3
-9.03	1	3.3	3.3	16.7
-7.44	2	6.7	6.7	23.3
-6.68	3	10.0	10.0	33.3
-5.86	1	3.3	3.3	36.7
-5.06	2	6.7	6.7	43.3
-4.27	2	6.7	6.7	50.0
-2.68	4	13.3	13.3	63.3
-1.89	2	6.7	6.7	70.0
-.30	3	10.0	10.0	80.0
1.29	2	6.7	6.7	86.7
2.08	1	3.3	3.3	90.0
3.67	1	3.3	3.3	93.3
4.46	1	3.3	3.3	96.7
8.43	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P13DELTA

Mean	-4.163	Std Err	1.161	Median	-3.475
Mode	-2.681	Std Dev	6.359	Variance	40.441
Range	31.750	Minimum	-23.319	Maximum	8.431

Valid Cases 30

P16DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-22.48	1	3.3	3.3	3.3
-18.51	1	3.3	3.3	6.7
-16.13	1	3.3	3.3	10.0
-14.54	1	3.3	3.3	13.3
-13.75	1	3.3	3.3	16.7
-11.37	2	6.7	6.7	23.3
-10.58	5	16.7	16.7	40.0
-8.19	1	3.3	3.3	43.3
-7.40	1	3.3	3.3	46.7
-6.81	1	3.3	3.3	50.0
-6.02	1	3.3	3.3	53.3
-4.22	4	13.3	13.3	66.7
-3.43	1	3.3	3.3	70.0
-2.64	3	10.0	10.0	80.0
-.26	1	3.3	3.3	83.3
.54	1	3.3	3.3	86.7
1.33	1	3.3	3.3	90.0
3.71	1	3.3	3.3	93.3
12.44	1	3.3	3.3	96.7
21.97	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P16DELTA

Mean	-5.865	Std Err	1.602	Median	-5.416
Mode	-10.575	Std Dev	8.775	Variance	76.992
Range	44.450	Minimum	-22.481	Maximum	21.969

Valid Cases 30

P17DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-21.89	1	3.3	3.3	3.3
-13.16	2	6.7	6.7	10.0
-12.37	2	6.7	6.7	16.7
-11.88	1	3.3	3.3	20.0
-10.78	1	3.3	3.3	23.3
-8.40	3	10.0	10.0	33.3
-7.61	2	6.7	6.7	40.0
-6.81	2	6.7	6.7	46.7
-6.02	1	3.3	3.3	50.0
-4.43	1	3.3	3.3	53.3
-2.84	1	3.3	3.3	56.7
-2.05	1	3.3	3.3	60.0
-1.26	2	6.7	6.7	66.7
-.46	1	3.3	3.3	70.0
.33	1	3.3	3.3	73.3
1.13	2	6.7	6.7	80.0
1.92	1	3.3	3.3	83.3
2.71	2	6.7	6.7	90.0
3.51	1	3.3	3.3	93.3
4.30	1	3.3	3.3	96.7
11.44	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P17DELTA

Mean	-4.616	Std Err	1.276	Median	-5.225
Mode	-8.400	Std Dev	6.991	Variance	48.869
Range	33.338	Minimum	-21.894	Maximum	11.444

Valid Cases 30

P18DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-24.61	1	3.3	3.3	3.3
-20.64	1	3.3	3.3	6.7
-17.46	1	3.3	3.3	10.0
-16.67	2	6.7	6.7	16.7
-15.88	1	3.3	3.3	20.0
-15.08	2	6.7	6.7	26.7
-14.29	3	10.0	10.0	36.7
-13.49	2	6.7	6.7	43.3
-10.32	2	6.7	6.7	50.0
-8.73	1	3.3	3.3	53.3
-7.14	1	3.3	3.3	56.7
-6.35	3	10.0	10.0	66.7
-3.97	1	3.3	3.3	70.0
-1.59	1	3.3	3.3	73.3
-.00	2	6.7	6.7	80.0
3.17	2	6.7	6.7	86.7
3.97	1	3.3	3.3	90.0
5.56	1	3.3	3.3	93.3
7.14	1	3.3	3.3	96.7
7.94	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P18DELTA

Mean	-8.070	Std Err	1.620	Median	-9.525
Mode	-14.288	Std Dev	8.871	Variance	78.693
Range	32.544	Minimum	-24.606	Maximum	7.937

Valid Cases 30

P19DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-23.31	1	3.3	3.3	3.3
-20.14	1	3.3	3.3	6.7
-18.85	1	3.3	3.3	10.0
-15.30	1	3.3	3.3	13.3
-14.88	1	3.3	3.3	16.7
-13.79	1	3.3	3.3	20.0
-12.20	1	3.3	3.3	23.3
-11.41	1	3.3	3.3	26.7
-9.82	1	3.3	3.3	30.0
-9.03	3	10.0	10.0	40.0
-8.64	2	6.7	6.7	46.7
-8.85	4	13.3	13.3	60.0
-3.47	2	6.7	6.7	66.7
-1.88	3	10.0	10.0	76.7
-1.09	1	3.3	3.3	80.0
1.29	1	3.3	3.3	83.3
3.67	1	3.3	3.3	86.7
4.47	2	6.7	6.7	93.3
5.26	1	3.3	3.3	96.7
12.41	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P19DELTA

Mean	-6.167	Std Err	1.481	Median	-5.850
Mode	-5.850	Std Dev	8.112	Variance	65.811
Range	35.719	Minimum	-23.313	Maximum	12.406

Valid Cases 30

P20DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-25.02	1	3.3	3.3	3.3
-14.70	1	3.3	3.3	6.7
-12.91	1	3.3	3.3	10.0
-13.11	2	6.7	6.7	16.7
-11.52	1	3.3	3.3	20.0
-10.73	2	6.7	6.7	26.7
-9.94	1	3.3	3.3	30.0
-9.14	1	3.3	3.3	33.3
-8.35	2	6.7	6.7	40.0
-7.56	3	10.0	10.0	50.0
-5.18	1	3.3	3.3	53.3
-3.59	3	10.0	10.0	63.3
-2.79	1	3.3	3.3	66.7
-2.00	1	3.3	3.3	70.0
-1.21	1	3.3	3.3	73.3
-.41	1	3.3	3.3	76.7
1.17	1	3.3	3.3	80.0
1.97	1	3.3	3.3	83.3
2.76	1	3.3	3.3	86.7
3.56	2	6.7	6.7	93.3
5.94	1	3.3	3.3	96.7
7.52	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P20DELTA

Mean	-5.572	Std Err	1.319	Median	-6.366
Mode	-7.556	Std Dev	7.223	Variance	52.174
Range	32.544	Minimum	-25.019	Maximum	7.525

Valid Cases 30

P21DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-24.19	1	3.3	3.3	3.3
-20.22	1	3.3	3.3	6.7
-19.43	1	3.3	3.3	10.0
-13.08	3	10.0	10.0	20.0
-13.08	1	3.3	3.3	23.3
-12.29	1	3.3	3.3	26.7
-11.49	3	10.0	10.0	36.7
-10.70	1	3.3	3.3	40.0
-9.91	3	10.0	10.0	50.0
-8.32	1	3.3	3.3	53.3
-7.53	1	3.3	3.3	56.7
-6.73	1	3.3	3.3	60.0
-5.94	1	3.3	3.3	63.3
-5.14	1	3.3	3.3	66.7
-2.76	1	3.3	3.3	70.0
-1.97	1	3.3	3.3	73.3
.41	1	3.3	3.3	76.7
1.21	2	6.7	6.7	83.3
2.00	2	6.7	6.7	90.0
2.79	1	3.3	3.3	93.3
4.38	1	3.3	3.3	96.7
7.56	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P21DELTA

Mean	-7.419	Std Err	1.424	Median	-9.112
Mode	-13.875	Std Dev	7.801	Variance	60.863
Range	31.750	Minimum	-24.194	Maximum	7.556

Valid Cases 30

P22DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-20.22	1	3.3	3.3	3.3
-14.67	1	3.3	3.3	6.7
-13.08	1	3.3	3.3	10.0
-11.49	3	10.0	10.0	20.0
-10.70	2	6.7	6.7	26.7
-9.11	4	13.3	13.3	40.0
-8.32	1	3.3	3.3	43.3
-7.53	1	3.3	3.3	46.7
-6.73	3	10.0	10.0	56.7
-5.94	1	3.3	3.3	60.0
-1.97	2	6.7	6.7	66.7
-1.17	1	3.3	3.3	70.0
-.38	1	3.3	3.3	73.3
.41	1	3.3	3.3	76.7
1.21	2	6.7	6.7	83.3
2.00	1	3.3	3.3	86.7
2.79	1	3.3	3.3	90.0
3.59	1	3.3	3.3	93.3
4.38	1	3.3	3.3	96.7
10.73	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P22DELTA

Mean	-5.382	Std Err	1.247	Median	-6.731
Mode	-9.112	Std Dev	6.829	Variance	46.629
Range	30.956	Minimum	-20.225	Maximum	10.731

Valid Cases 30

P23DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-24.35	1	3.3	3.3	3.3
-18.79	1	3.3	3.3	6.7
-14.85	2	6.7	6.7	13.3
-14.03	2	6.7	6.7	20.0
-13.24	3	10.0	10.0	30.0
-12.44	2	6.7	6.7	36.7
-10.86	3	10.0	10.0	46.7
-10.06	1	3.3	3.3	50.0
-9.27	2	6.7	6.7	56.7
-7.68	1	3.3	3.3	60.0
-6.89	1	3.3	3.3	63.3
-6.09	2	6.7	6.7	70.0
-5.30	1	3.3	3.3	73.3
-4.51	1	3.3	3.3	76.7
-2.92	1	3.3	3.3	80.0
-1.33	1	3.3	3.3	83.3
1.05	1	3.3	3.3	86.7
1.84	1	3.3	3.3	90.0
6.61	1	3.3	3.3	93.3
7.40	1	3.3	3.3	96.7
12.16	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P23DELTA

Mean	-7.946	Std Err	1.453	Median	-9.666
Mode	-13.237	Std Dev	7.960	Variance	63.366
Range	36.512	Minimum	-24.350	Maximum	12.162

Valid Cases 30

P24DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-18.59	1	3.3	3.3	3.3
-17.80	1	3.3	3.3	6.7
-13.83	1	3.3	3.3	10.0
-13.04	1	3.3	3.3	13.3
-12.24	1	3.3	3.3	16.7
-11.45	3	10.0	10.0	26.7
-9.86	1	3.3	3.3	30.0
-9.07	3	10.0	10.0	40.0
-6.69	2	6.7	6.7	46.7
-4.31	3	10.0	10.0	56.7
-3.51	2	6.7	6.7	63.3
-1.93	3	10.0	10.0	73.3
-1.13	1	3.3	3.3	76.7
-.34	2	6.7	6.7	83.3
.46	2	6.7	6.7	90.0
1.25	1	3.3	3.3	93.3
2.04	1	3.3	3.3	96.7
6.01	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P24DELTA

Mean	-5.920	Std Err	1.116	Median	-4.306
Mode	-11.450	Std Dev	6.115	Variance	37.389
Range	24.606	Minimum	-18.594	Maximum	6.012

Valid Cases 30

P25DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-22.39	1	3.3	3.3	3.3
-20.01	1	3.3	3.3	6.7
-13.66	1	3.3	3.3	10.0
-12.86	1	3.3	3.3	13.3
-12.07	2	6.7	6.7	20.0
-11.28	3	10.0	10.0	30.0
-10.48	1	3.3	3.3	33.3
-8.10	2	6.7	6.7	40.0
-7.31	4	13.3	13.3	53.3
-5.72	3	10.0	10.0	63.3
-4.13	4	13.3	13.3	76.7
-.96	3	10.0	10.0	86.7
-.16	1	3.3	3.3	90.0
.63	2	6.7	6.7	96.7
18.09	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P25DELTA

Mean	-6.671	Std Err	1.332	Median	-7.306
Mode	-7.306	Std Dev	7.294	Variance	53.201
Range	40.481	Minimum	-22.388	Maximum	18.094

Valid Cases 30

P26DELTA

Value	Frequency	Percent	Valid Percent	Cum Percent
-12.87	1	3.3	3.3	3.3
-11.28	1	3.3	3.3	6.7
-10.49	2	6.7	6.7	13.3
-8.11	2	6.7	6.7	20.0
-7.31	1	3.3	3.3	23.3
-6.52	1	3.3	3.3	26.7
-5.73	1	3.3	3.3	30.0
-4.93	3	10.0	10.0	40.0
-4.14	2	6.7	6.7	46.7
-3.34	2	6.7	6.7	53.3
-2.55	1	3.3	3.3	56.7
-1.76	2	6.7	6.7	63.3
-.96	2	6.7	6.7	70.0
-.17	2	6.7	6.7	76.7
1.42	2	6.7	6.7	83.3
3.01	1	3.3	3.3	86.7
3.80	1	3.3	3.3	90.0
5.39	2	6.7	6.7	96.7
7.77	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	

P26DELTA

Mean	-3.026	Std Err	.952	Median	-3.344
Mode	-4.931	Std Dev	5.214	Variance	27.183
Range	20.638	Minimum	-12.869	Maximum	7.769

Valid Cases 30

APPENDIX G

PROBE DELTAS (PROBE VALUE - LARGE HEADFORM VALUE + 6.3 mm)
FOR THE SUBJECT IN THE PROPOSED SIZE EXTRA-LARGE HELMET

APPENDIX G

PROBE DELTAS (PROBE VALUE - LARGE HEADFORM VALUE + 6.3 mm) FOR THE SUBJECT IN THE PROPOSED SIZE EXTRA-LARGE HELMET

Line 1: P1DELTA P2DELTA P3DELTA P4DELTA P5DELTA P6DELTA P7DELTA

Line 2: P8DELTA P9DELTA P10DELTA P11DELTA P12DELTA P13DELTA P14DELTA

Line 3: P15DELTA P16DELTA P17DELTA P18DELTA P19DELTA P20DELTA P21DELTA

Line 4: P22DELTA P23DELTA P24DELTA P25DELTA P26DELTA

Note: Delta Values Greater Than 2.5 mm Indicate Loss of Recommended Standoff at a Given Probe Location.

ID=43	.60	-4.38	-4.84	-12.23	-7.14	-2.62	-8.89
	-10.57	-11.77	-13.49	-11.11	-9.89	-3.34	-9.47
	-11.36	-10.52	-13.91	-14.24	-4.21	-8.30	-9.86
	-15.41	-14.78	-16.96	-17.58	-6.47		

Number of cases read = 1
